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THE

# VIRGINIA

# MEDICAL JOURNAL.

Editors:

JAMES B. McCAW, M. D.—GEORGE A. OTIS, M. D.

VOL. X.

RICHMOND, VIRGINIA:
PRINTED AND PUBLISHED BY RITCHIE AND DUNNAVANT.
1858.

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MEDICAL JOURNAL.

JANUARY 1858.

ART. I.—*The Pathology and Treatment of the Paralysis of Motion.* By J. P. BATCHELDER, M. D. New York.

WE do not consider the paralysis of which we are about to treat, a disease, but the symptom of one which mainly affects the voluntary muscles, or the muscles of animal life. The noncommunication of the appropriate stimulus to these muscles by the mind, constitutes the disease of which paralysis is the symptom. The muscles having ceased to act, form the habit of inactivity; and the mind, acquiescing from necessity or otherwise, contracts the habit of not communicating the necessary and appropriate stimulus to them through the nerves; so that, by the conjunction of these causes, additional morbid conditions of a secondary and somewhat chronic nature, have been induced, of which paralysis is also in this connection a symptom. As the removal of these cures the patient, we shall endeavor to ascertain and settle their pathology, from which we hope to be able to deduce the proper method of treatment. The performance of function induces a derivation of blood to an organ, which in a measure ceases when the function ceases; and the organ diminishes in size as the natural and almost inevitable consequence. This is a general law of the sys-

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tem, to which the muscles of animal life, like all other organs, are subject; hence they become atrophied in paralysis, or when kept a considerable time at rest from other causes. Thus deprived of blood, their capillary vessels shrink, and what the capillaries of a part do, that will the part as a whole do. The atrophied muscles become shortened, and refuse to be elongated except by force; neither of which would have happened but for this shrinking of the capillaries.

In two points of view then is paralysis to be considered a symptom: 1—In relation to the function of the affected muscles. 2—In respect to their physical condition. Regarded in the former aspect, it is a sign that the connection between the mind and the muscles is interrupted; in the latter, it is an indication of the change which the muscles themselves have undergone. In the one case, it is a symptom of functional disease—in the other, of structural change, which consists of a general contraction of the muscular capillaries, and atrophy of the parenchyma of the affected muscles.

When a person is stricken down by a shock of apoplexy or palsy, the power of the nerves to stimulate the voluntary muscles to action is interrupted, because certain changes in the cerebral centre do not then take place; or if they do, corresponding changes in that portion of the peripheral brain (of which we shall presently speak), which is appropriated to the muscles of volition, do not occur, and paralysis of motion ensues.*

This state of things may continue after the primary cause of the paralysis has been removed or ceased to operate; but the patient having been quiescent for a time, becomes acquiescent from habit, and will not make the slightest effort to move his limbs—indeed, insists that he cannot do it—that it is impossible. He has, as it were, forgotten how to produce the antecedent cerebral change as an act of the will;

* By a parity of circumstances and reasoning, we would account for the existence of paralysis of sensation.

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and the only way to enable him to recover the power or learn the art of doing it, is to cause the members to perform the motions calculated to produce the changes in the brain. The motions first and the changes in the cerebrum next, is the order and method of nature. By this expedient, duly performed and persevered in, he will at length be enabled to re-enact the cerebral change, and the movement of the limbs will follow in exact proportion to the energy with which this change in the brain is effected. Both, for obvious reasons, will be feeble at first; but he must be encouraged and helped; when by repetition, the efforts will be more and more vigorous, and the results more and more apparent and satisfactory.

In this way the functional disease is cured, and the structural affection is also finally removed by the same process. Exercise, as we all know, causes the muscles to increase in volume as well as power.

The paralytic, then, so far as the paralysis is concerned, is in much the same condition as the infant at birth; and in order to recover the use of his limbs, must go through a course of training somewhat analogous to that to which he was subjected when he first learned their use—his muscles must be re-educated. There is, however, this difference: the infant at birth is an idiot, (so far at least as mind and the performance of its functions are concerned,) while the subject of paralysis has some intellectual capital to begin with; but very little after all, so far as the affected part is concerned. There is another point of difference between the child and the paralytic, which savors strongly of contrast, and is in favor of the former, who is imbued with an instinctive propensity to action—a restless activity, which nothing but positive fatigue or exhaustion can restrain; while in the latter, inertness and an indisposition to motion prevails, which is at first very difficult and sometimes almost impossible to overcome; but the muscles not having entirely lost their contractility, begin sooner or later to act and produce movements of the limbs, analogous to those which

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occurred in infancy, and which now as then, awake the attention of the patient, and at length re-endow his paralyzed limbs with some degree of voluntary motion, which, without proper training, commonly stops vastly short of a cure.

In paralysis, the muscles are, as suggested, seldom wholly destitute of contractility, but the patient has lost the will and the power of making them contract. The doctrine, then, which forms the basis of our theory and treatment too, is, that the paralytic must again learn to use his limbs just as he learned to use them in infancy; but as he cannot begin, as did the infant, to move them; and as nature, having once performed her task, refuses to renew her labors, we must, therefore, substitute our own hands for hers, and move his limbs as she moved them at first, and like her, invoke and direct his attention to the motions thus effected. We must indeed go further, and endeavor to induce him to co-operate with and assist us in the work. While moving his limbs, we should try to concentrate his attention upon the principal muscles by which the motions we are causing to be made are naturally executed, and urge him to make those muscles contract. A good way of doing this is to place his hand over the muscles in our own limb which we wish to have brought into play in his, and make them contract with force. This expedient may be likewise resorted to in his own unaffected members.

It is better to begin with the least complicated motions, as simple flexion and extension of the arm at the elbow, which are done mainly by two muscles. These motions may be performed by the well limb, and the patient exhorted to attend to the operations of his own mind as well as to the movements of his limb. He may likewise be requested to fix his attention on the affected limb, and consider what he did in relation to the movement of the well limb, and what he desires and intends to do, and what he must actually do in order to make this limb imitate the movements of the other.

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In a paralysis of some duration, the muscles of the palsied limbs are not all in the same predicament. Some are powerless; some are too strongly contracted; others, neither contracted nor powerless, are, nevertheless, quite ready to act, not in obedience to the will, but in opposition to those which can and do act somewhat in accordance with its dictates; but all the muscles, generally speaking, concur in disregarding the volitions of the patient.

From these different conditions of the muscles, the indications of cure may be deduced with strict logical and pathological propriety. They are:

1. To restore strength to the powerless muscles.
2. To overcome abnormal contraction in others.
3. To obviate or counteract the perverse action of such as act irregularly.
4. To renovate the will, and reconnect it with the affected muscles.

The first three indications point directly to the 4th, which is, in fact, the ultimate object aimed at.

### *Treatment.*

*First indication.*—To restore strength to the powerless muscles.

*Second indication.*—To overcome the inordinate contraction in others.

As these indications are, to some extent, answered by the same means, we propose to consider them in connection, so far, at least, as the sameness of treatment goes.

The muscles, in paralysis of the arm from lead, furnish a tolerably good example of both these conditions. The extensors are powerless—the flexors, over contracted.

In restoring tone to the powerless muscles, we resort, with great prospect of success, to an agent inherent in the muscles themselves, denominated "passive contraction" by modern physiologists. This power causes a muscle to contract and shorten whenever its origin and insertion have

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become approximated. Muscles thus circumstanced, after a while resist with great energy all endeavors to elongate them, as every surgeon well knows who has had much to do with dislocations of long standing. In such and analogous cases, each entire muscle accommodates itself to the altered condition which obtains between its origin and insertion. To enable paralyzed muscles to recover their power, we avail ourselves of the knowledge of these results, and cause their origin and insertion to approach each other, and keep them in this position for a longer or shorter time, as the case may be, or until the muscular fasciculi have begun to contract and adapt themselves to the change. This is effected by mechanical appliances—as splints of suitable form, adapted and applied so as to maintain the parts in this condition till the muscles recover their tone. Take, for example, the paralyzed hand, before alluded to. A splint, wide as the hand, should be applied along the forearm, from near the elbow to the ends of the fingers. To this the palm should be bound with a roller, which, while it keeps the splint in place, does not in the least interfere with the movements of the wrist. To the loose end of the splint near the elbow a weight (a small bag of sand will do), sufficiently heavy to keep the hand and fingers fully extended in spite of the contracted flexors, except when they (the flexors) act in obedience to the will. When they have thus acted, the patient should endeavor, by making the extensors contract, to bring the hand back into a state of full extension, in which he will be assisted by the weight appended to the upper end of the splint. In order to give him fair play—in other words, to enable him to get rid of the uncalled for action of other muscles—we have found it expedient to let the forearm at the wrist rest in a sling, with the splint excluded. In this way all the principles we wish to have invoked may be summoned to our aid.

The contracted muscles, usually the antagonists of the powerless, must be elongated, and the limb put and kept in a position which will prevent the recurrence of their con-

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tracted state. The position of the limb should be studied as well in reference to the latter as to the former class of muscles—thus accommodating the treatment alike to the first as well as to the second indication. The splint, properly adapted and applied, is the best and perhaps the only instrument required for the accomplishment of both these purposes. The hand and fingers should be brought to the proper degree of extension, and maintained in that state till the over contracted muscles have become fully elongated and given up the contest, and until the others also have recovered their power of contraction. The splint should be taken off several times a day, and the limb rubbed and moved slowly and gently in every direction for half an hour or longer, and again put up in the apparatus.

Whenever the limb is moved, the attention of the patient should be directed to the movement and to the muscles also, by which that movement is ordinarily accomplished, and his co-operation likewise invoked and insisted on. This point will be more particularly adverted to when we come to consider the 4th indication.

*Third indication.*—To obviate or overcome the perverse action of certain muscles.

The muscles to which we now allude, are neither powerless nor over contracted, but act with considerable force—not in obedience to the will, but in opposition to those which act according to its dictates.

The voluntary action of one set of muscles, excites involuntary contraction in another, by simply putting these last on the stretch. Nature's design in this is to give firmness and stability to the limbs while at rest, and steadiness to their movements when in action, without requiring any special heed on the part of the individual in order to secure the intended result. Why, in health, no inconvenience springs from this arrangement of nature, is accounted for on the principle that then the muscles, habitually active, and prompted by a lively volition, act with more force than those which are excited by the mere stimulus of extension;

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but in paralysis the tables are turned. The muscles are then actuated by an enfeebled will, and, inert from habit or disease, scarcely simulate voluntary motion, or perform it so inefficiently as to be overpowered by those which are excited by other stimuli. For example: whenever the patient thus circumstanced tries to extend the hand and fingers, the flexors will not only resist this effort, but actually bend both hand and fingers; or when he attempts to flex the arm at the elbow, various other motions not *designed in the programme*, will be performed. The muscles, thus put on the stretch, and acting independently and in full accordance with their own energetic propensities, overcome those which act merely in obedience to the enfeebled will of the paralytic. Hence the necessity for resisting the efforts of these froward agents, until they submit, or the former prevail, which is to be accomplished by such mechanical contrivances as are suited to each particular case.

*Fourth indication.*—To renovate the will and reconnect it with the affected muscles.

"At birth, the human infant," without volition, voluntary power, or even mind, is "the very representative of weakness and imbecility," but subsequently comes to be indued with these and other intellectual faculties. In what way, asks curiosity, is this effected? An interrogation of surpassing interest, in which general science and medical science, in special reference to our subject, are deeply concerned. Therefore both prompt to an enquiry into the manner in which these faculties are acquired.

In this investigation, we start with the declaration that the faculties in question are not original endowments by nature, but attainments acquired by the child itself through the medium and instrumentality of the muscles, with the co-operation of the nerves, which, like the muscles, never perform their appropriate function, unless excited by some agent, which is, in the case of both nerves and muscles, primarily the same—the blood.

The muscles of animal life begin to contract *in utero;* and

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their contractions are repeated after birth with increased force, and in a short time begin to be perceived by the ultimate nerve fibres, the peripheral brain* whose perceptions are transmitted through the nerve cords to the central brain, in which, owing to its immaturity, no very appreciable changes are at first produced; but when its structure becomes more mature, the transmitted influences excite changes which produce consciousness. Now, this consciousness is the inception of mind—the inauguration of intellect; and as often as the muscles contract, these changes in the central organ—the organ of mind—are repeated, and consciousness awakened, till the inchoate mind is instinctively directed to the part in which these contractions occur. And it is furthermore conceded that the direction of the mind to a part, causes a determination of blood to that part, and that the blood is the natural and primary stimulus which excites the

* The nerves, from their exit through the apertures in the skull and spinal column, to their termination in the ultimate fibre, are enclosed in a sheath; but the branches into which these fibres break up are, like the primitive fibres within the brain and spinal marrow, destitute of neurilemma. The perceptive faculties of these termini are so modified by the substances with which they are in immediate contact, as to render them scarcely cognizant of changes not peculiar to those substances. Hence the nerves distributed to the muscles of animal life, take cognizance of those changes only which pertain to them and to them alone. These naked termini constitute what we denominate the peripheral brain, which, in every part perceives and takes cognizance of changes that occur in the immediately surrounding substances. It is highly probable that the nerves are only a continuation of the brain or nervous centres into all parts of the body. This view of the subject seems to be fairly and fully supported by analogy. "The so called nerves of pure sense—the olfactory, optic and auditory nerves—may more properly be regarded as portions of the brain itself, than as mere nerves, for they possess most of the anatomical characters of nervous centres. The intra-cranial portion of the first is as distinctly compounded of vesicular and fibrous matter as a convolution of the brain. In the peripheral expansion of the optic nerve, the retina, it will be hereafter shown that the vesicular elements of a nervous centre are as unequivocally present as in the olfactory bulb. As regards the auditory nerve, there are also some grounds for the statement that the vesicles of gray matter are deposited at its peripheral expansion in the internal ear." Todd & Bowman's Lectures, p. 205. The nerve cords, sheathed in the neurilemma, form the connecting medium between the peripheral and central brain, through which impressions are conveyed, consciousness awakened, and the mandates of the will transmitted to parts subject to its control.



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muscles to act. Consequently, the mind repeatedly directed to any one or more of them, will cause it or them to contract.

This process is rendered more and more easy by repetition, and is finally perfected by habit, which the child sooner or later acquires. He also becomes conscious of the fact that when these changes (which directed the mind to certain muscles) took place in the brain, they were uniformly associated with certain movements of his limbs; and he moreover finds that contraction in certain muscles causes this or that limb to move. Consequently, when this or that motion is desired, he directs the mind to this or that muscle, and the desired motion immediately ensues—why or wherefore he cannot tell—nor is it necessary he should. Volition, thus commenced, is soon followed by the acquisition of voluntary power, and this by voluntary motion. The exercise of this power and its results become more and more precise and perfect, in the paralytic as well as in the child, according as the efforts are more or less frequently and judiciously made.

That this is the method to be pursued in educating the muscles, every one, we think, may satisfy himself, who will take the trouble to notice the trials made by the child while learning to use his limbs; or who will try the experiment of educating his own muscles to the performance of a series of motions to which they have not been accustomed.

Having acquired the power of moving his limbs, the child, although he continues to exercise it, soon forgets the process by which it was obtained, but nevertheless continually resorts to it in after life, whenever any new or unpracticed operation is to be performed. To restore motion to muscles and re-educate them, as in cases of palsy (and some other affections we might add), and give the will* dominion

* "That mental state which produces or resists motion, is the will. When it exists, it first produces motion—change of condition (motion) in the capillaries of the brain, at the origin of certain nerves, and if persisted in, produces change of condition (motion again) in the peripheral extremities of those nerves, and the movement of the limb ensues." We cannot say to whom the

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over their action, we must, we repeat, adopt the plan of first impressing passive motion on the limbs, and endeavor to keep the patient's attention fixed on the movements, and also on the muscles, by which these movements are ordinarily made, and moreover put forth his mental as well as physical energies and efforts to make those muscles contract.

### *Of Medication.*

*Electricity, galvanism and strychnine* are the principal remedies which at the present day are most relied on in the treatment of paralysis. They have been, it has seemed to us, rather empirically employed, the principles on which their use is based not having been very plainly declared, or clearly illustrated. They should, we think, be used mainly for the purpose of exciting motions in the paralyzed limbs analogous to the primary movements in early infancy, to which the attention of the paralytic should be directed, and of which he should avail himself in recovering the use of his limbs, just as he did when he first acquired a mastery over them. In accordance with these principles, electricity and galvanism ought to be employed at first with great caution, and in the gentlest manner possible, the object being to produce effects very like the primitive action of the muscles. Like the primitive actions, these effects may be cautiously increased. The motions caused by these agents may be beneficial by retarding or preventing the atrophy of the affected muscles. To avoid doing irreparable mischief as well as to obtain all the benefit to be derived from these agents, we repeat with solicitude the injunction that their influence should be very slight, scarcely perceptible at the beginning, and increased as the cure progresses. By neglecting this precaution, and applying these remedies too strongly at the commencement, the excitability still remain-

above quotation should be accredited. Our doctrine is, that the primordial change is in the peripheral extremities of the motal nerves, and that the motions of the limbs communicated through the nerve cords to the central brain give rise to the changes in that organ productive of thought.

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ing in the muscles will be extinguished, and the hopes of the patient blasted forever.

One important item in the use of these agents must not be omitted, which is, that the patient's attention be continually invoked. Whenever an application is about to be made, he should be apprised of it, and prepared for it, and exhorted to prolong the motion excited; for the influence of concentrated attention, when accompanied with the expectation of change, in modifying organic functions, is an important agent in effecting cures in this affection. Therefore, the patient should be convinced of the necessity of this, in order to secure all the benefit which may be derived from these remedies.

*Strychnine.*—This most singular drug causes motions in the paralyzed limbs, which, like those produced by electricity and galvanism, somewhat resemble the primitive movements already alluded to, and of which we should avail ourselves in the treatment, very much after the manner suggested in relation to the last mentioned agents. The patient ought to be admonished to prolong these excited actions when they come; but they cannot be anticipated; for when slight, they are preceded by no premonitory sensation;* but when strong, as when caused by large doses, one-third or half a grain of the drug three times a day, they are always preceded by an indescribable sensation in the muscles—as if they were alive—or a sort of crawling, immediately following which is the jerk or spasm. We should endeavor to

* The premonitory symptom of tetanus is a stiffness of the thighs and legs in the morning on first waking, which goes off in a short time—to be returned the next morning. During this day or the next this terrible disease declares itself in an unmistakable manner. A similar rigidity of the lower extremities is in some instances a premonition of the more general action of the strychnine, and admonishes the reduction of the dose, or suspension, for a while at least, of the drug. In all cases in which tetanus is to be apprehended, enquiries should be made every morning by the medical attendant respecting this stiffness, as it is not apt to be mentioned by the patient, on account of its having soon ceased to affect him. He should be purged with calomel, and put and kept under the decided effect of opium. By so doing I am well satisfied that the tetanic affection may be, sometimes at least, prevented.

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make the same use of these as was made of the primal motions by the child in its early infancy. By omitting to adopt the course suggested, less benefit will accrue to the patient from the use of this medicine than he would otherwise experience.

By way of illustration, we introduce the following case:

J. B*** aged 26 years, returned from a sea voyage about the middle of March 1854, enjoying good health. A few weeks previous, while on the coast of South America, he experienced a strange, indescribable sensation in his head, mostly about the crown and right side, which could not be called a pain, but seemed more like dizziness than any thing else. For this an English physician was consulted, who prescribed cathartic pills, and a blister to the nape of the neck, which greatly relieved him—so much so that when he arrived in this country he thought himself well, and continued so until the middle of May, when the same disagreeable feeling returned, and kept getting worse, till at the end of a week he was obliged to take his bed, seemingly more from a sense of general weakness than from any other cause. In a short time (he does not distinctly recollect how long) he lost the use of the right arm and leg and right side of his face; the symmetry of which was disturbed by the traction of the features to the opposite side. He could masticate tolerably well, but could not swallow without danger of suffocation. To avoid this, he adopted the expedient of holding the morsel in the back part of the mouth till the parts seemed to have completed their arrangements for deglutition, before he made the attempt—a practical hint, worthy of consideration in analogous cases.* Other complications, as constipation and retention ensued, and were as usual followed by incontinence of urine and involuntary discharge of pus.

* The cause of the difficulty of swallowing was the lodgment of the matter to be swallowed in the paralyzed side of the fauces; and the arrangements spoken of in the text consisted in dislodging and transferring it to the unaffected side. Until this was done, the unaffected muscles, in their action to cause the morsel to pass into the œsophagus, would only force it upon the glottis and upper part of the larynx.

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He was confined to the bed about twenty-two weeks; at the end of which, he was taken out of bed by two persons, placed upon his feet, assisted to stand and step a little, and soon marched several times a day into the hall. In a month he was able to move about with a cane, and shortly ventured into the street alone. When I first saw him, October 1st, 1856, he walked as persons in his condition generally do—swaying the body to the opposite side and swinging the diseased limb round in order to bring the foot forward, while the arm which hung loose and useless by his side, was moved much in the same way, but could be moved somewhat in various directions by the muscles about the shoulder; mostly, however, in opposition to the will. The same was likewise true in relation to the movements of the forearm. The flexors of the wrist and fingers were so obstinately contracted that it required much force to straighten either—in fact he was obliged to take his arm in one hand near the wrist, and hand in the other, and place his knee against the back of the wrist in order to bring the hand and fingers fairly in a line with the forearm, or carry them backward so as fully to elongate the flexors. The thigh could be only half flexed on the pelvis, but not carried backward; and the leg but slightly flexed on the thigh. He could not indeed lift the afflicted foot from the ground, while the body was kept in an upright posture, and the thigh in a line with the body. The mouth was still somewhat drawn to the left side. The speech, although much improved, was still faulty; but pressure with the hand on the right cheek enabled him to articulate much better. Deglutition was not quite easy, but much less difficult than at first. Blowing, smiling and laughing were mostly on one side of the mouth, and whistling entirely out of the question. Previous to July 1851, when he first went to sea, he had lived very irregularly—intemperately and incontinently—had contracted syphilis, which went through its several forms—primary, secondary and tertiary; but during his seafaring life he had little to do with women. In boyhood and subsequently he was much in the habit of masturbating and

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has now not unfrequently nocturnal emissions. In addition to all his other difficulties, this poor fellow is apparently far gone in consumption.

On the 2d day of October last he came under my care for the treatment of the paralysis, and visited my office nearly every day for two weeks, when he was attacked with what proved to be an abscess near the anus, which confined him to the house three weeks, and much of that time to the bed; during which I did not see him, having forgotten to take his address. After the bursting of this abscess, which ultimately terminated in a complete fistula in ano, he resumed his visits, and continued to do so until the weather became so cold as to render it imprudent for him to come out, except on very pleasant days. Consequently, I saw him a few times only during the month of December. He seemed to come with reluctance, which, with the fact that amendment had almost ceased, led me to suspect that the course of treatment to be pursued at home had been neglected, which was the fact.

In hemiplegia and paraplegia also, the muscles arising from the trunk and inserted into the limbs below, are those in which the recuperative process first begins and progresses most rapidly; and those of the inferior extremities recover sooner than those of the upper.* Hence, these patients generally, perhaps always, commence walking before they have regained the power of using the arms and hands.† The

* Of this seemingly unimportant fact, a very important advantage may be occasionally taken in the treatment of paraplegia, in many cases of which we shall find on close examination, that the muscles arising from the trunk and inserted into the limbs below, have to some extent partially recovered a contractile power, or were not from the first wholly deprived of contractility. This is apt to be the case when paraplegia occurs in infancy or childhood. In such, and we are inclined to think in all cases in which this state of the muscles obtains, the patient may by the help of a suitable apparatus and other appliances and means, be made to walk with a tolerable degree of satisfaction and usefulness.

† Probably this is attributable to the fact that patients are usually soon placed upon their feet, and compelled, as it were, to make an effort to stand and walk; in which case the weight of the body excites the muscles belonging to and connected with the inferior extremities to early and somewhat energetic action,

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truthfulness of these statements was very manifest in our case.

To direct and fix his attention upon the muscles to be brought into action, and likewise upon the motions to be impressed on the lower limb—particularly the leg, and give definiteness and precision to these motions, he was placed in a position facing a door-post (the door being open), with the body and thigh of the affected side in close contact with this fixture, and held steadily there; thus situated, he could not flex the leg on the thigh, which was slowly done by another, while the patient co-operating, endeavored to raise the foot from the floor by bending the knee. In this way he soon acquired the power of raising the limb by his own efforts, so long as he remained in this situation; but the moment he left the fixture, the thigh would be flexed on the pelvis, whenever he attempted to bend the knee. The expedient of fixing a strip of cloth to the leg of his pants low down, or of putting a bandage about the ankle with a loop in the free part, held in the well hand, enabled him to substitute it for that of another; but as it was desirable to direct and fix the will of the patient as much as possible upon the muscles and movements of the diseased limb, and as this plan seemed to divert his attention therefrom, it was relinquished, and in the course of a few weeks he acquired such power over the former as to raise the foot, to kick with force, and even run.

To enable him to flex and extend the foot, was a more difficult task; for the accomplishment of which, he was placed in a chair, and the foot flexed and extended at the ankle by another, he at the same time using his best endeavors to assist. The improvement here was in a short time quite apparent, but less rapid than in the motion of the leg on the thigh. After a while the experiment of standing upright on the affected leg only was tried; and by steadying

while those of the arms and hands are allowed to remain unexcited and idle. The early training of the upper extremities would cause them to improve, pari passu with their congeners.

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himself with a hand on the back of a chair, he succeeded tolerably well in this difficult undertaking, and was not long in acquiring the power of not only sustaining himself, but of maintaining his equilibrium on this limb alone. In the progress of improvement the paralytic habit of walking almost entirely disappeared—especially if he walked slowly, and took short steps, as he was instructed to do. To exchange this awkward gait for one more natural and comely, was mainly accomplished by setting the lame foot flatly and firmly on the floor or ground, and taking care not to move the other until the weight of the body was transferred to the affected limb, when the well foot was to be raised, carried forward and planted steadfastly on the ground. This done, the lame limb and foot were put in requisition to push the body forward upon the well member. At first he was obliged to take very short steps, but soon acquired the habit and ability to take steps about the usual length, and to walk so well that few would suspect that any thing ailed him. Besides, he even became at length able to run with considerable facility and smartness.

In disciplining the superior extremity much difficulty was experienced, principally from three causes—the weakness and inefficiency of some muscles, the rigidly contracted state of others, and the abnormal action of a third class. Those obstinately contracted—mostly flexors—were fully elongated by main strength, and their recontraction obviated and prevented by the application of splints, which not only resisted the contraction, but kept them completely elongated.* These splints were removed from time to time, and the limbs exercised in the manner described. In case the muscles thus kept on the stretch became painful, the splints were laid aside until the muscles became easy; and as they prevented sleep, they were allowed to remain off during the night, which it was thought somewhat impeded the cure,

* The contracted state of the fingers was very successfully treated by means of the glove and pieces of whalebone, as will be hereafter described.



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both in regard to the restoration of strength to the enfeebled muscles, and the counteraction of those which were unduly contracted. The irregular contraction of the muscles was likewise resisted, in some instances, by splints, and in others, by bands so applied as to prevent abnormal action. It was found that when the action of some of these muscles had been successfully resisted for a short time only, they gave up the contest, and became submissive.

We have stated that the muscles arising from the trunk and inserted into the limbs, had acquired, or seemed to have retained more mobility than others not connected with the trunk; and in the course of treatment, these very muscles were found to be the most mischievous and troublesome of all, particularly those of the upper extremity; for whenever an attempt was made to raise the hand to the head, instead of permitting the biceps flexor to act with freedom in its own appropriate way, the deltoid would assume the right of acting, and raise the arm from the side and move it in all directions so far as its own organization would allow; and other muscles connected with the scapula would also join in the melee, and like the deltoid, move the limb in various ways, but always in opposition to the will. This game was effectually stopped by fastening the arm with a long bandage, closely and almost immovably to the side, and then having the forearm moved at first by another, and then by the patient himself; in this manner the control of the will was acquired and established, so that the limb would be flexed, extended, and indeed moved in almost any direction and to almost any extent, by his own volitions. The head also was moved to the right and left; farther and farther from day to day, and likewise backward and forward, until the power of the muscles by which these movements were effected seemed to be quite recovered. The muscles of the face were in like manner exercised, by which its symmetry was almost entirely restored. He could laugh and blow about as well as ever, and would doubtless have completely

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recovered had he been more favorably situated.* As it was, during the short time he was under treatment, strictly speaking, a few weeks only, he became able to pick up a pin on the table or floor; to button his shirt bosom and vest; to split kindling wood with a hatchet; and do other small matters of business. When he had so far convalesced as to assay the use of the hatchet, he would often try eight or ten times before he could strike a piece of kindling wood two inches square; but in less than a month he would, sometimes for days together, hit a piece one-fourth that size, at almost every attempt, and at others only after several. When he began to use this tool he was instructed to raise it as high as he could well do, and then bring it down *very slowly* upon a designated part of the stick, which he was directed to mark, and fix his eye upon. Having acquired the control of the muscles, he was desired to discharge the blow at first with only a slight degree of force, which was to be increased, according to circumstances, until he could deliver it with tolerable accuracy as well as efficiency—so much so that for two or three weeks before he ceased coming to my office, he amused himself by reducing the pieces of kindling wood to a more convenient size, and was not a little proud of his achievements in that way. Having never learned to

* Owing to the pulmonary disease and the slight probability of recovery, the friends of this unfortunate young man thought it hardly worth while to make further attempts to cure the paralysis. As this appeared to be a somewhat rational conclusion, in which the patient also concurred, the treatment was discontinued. About three months ago he called on me, looking much better than when I last saw him. Having so long neglected the treatment for paralysis, he had lost much of what he had previously gained, but was, nevertheless, much better in this respect than when he first presented himself to me in October 1856. Expressing a desire to come again under treatment, the same system was resumed. Through the kind-heartedness of Mr. Mongomery, the benevolent superintendent of the gymnasium in Crosby street, he has been permitted to visit, free of expense, that institution as often as he pleases; and has done so almost daily, and in consequence improved very rapidly—particularly in regard to strength and muscular development. Mr. Mongomery and the young gentlemen attending at this important and well managed establishment, have taken great interest in this case, and have never failed to encourage the poor fellow, and assist him in all his endeavors, by instruction and otherwise.

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write, he took a few lessons with the pencil, and succeeded, beyond expectation, in making straight marks, O, D, &c.

In regard to this part of the treatment—the training of the muscles—we deem it important, in order to gain the confidence of the patient as well as for other reasons, to begin, as has been suggested, with the simplest motions—as flexion and extension of the arm for instance, and continue their repetition, still urging him to co-operate in each movement, when he will unconsciously make the motions almost entirely without our help, which should be withheld by degrees, and as imperceptibly as possible. When apparent to the assistant that this can be done without aid, or with very little, the attention of the patient should be called to the fact; the truth of which may be so demonstrated as to remove all doubts in regard to his ability. When this is done, the cure may be considered as half accomplished.

While these trials are being made, the patient must be continually admonished to move the limbs at first slowly, and always with reference to accuracy, but regardless of force. When, for example, he can flex the forearm to an acute angle with the arm, and extend it to a line with it, he may be instructed to do so with increasing agility and potency—the one or the other or both augmented and regulated according to circumstances. In the re-education of all the muscles, this plan should be pursued.

This system of treatment can be carried out to perfection in hospitals and in families only in which full and proper assistance and suitable appliances can be commanded and applied. For the hands of an assistant, pullies, treadles, and perhaps other mechanical contrivances, may be substituted, and the patient instructed to carry on the required motions by the efforts of his own unparalyzed limbs. This may be found difficult if not impracticable at first, not exactly on account of an actual indisposition or want of desire on the part of the patient, but because of the absence of positive will, which must be recreated and reconciled with the muscles. Settled in the conviction that matters cannot

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be helped, the paralytic is apt to become satisfied with his condition, and is with difficulty induced to make an effort to change it even for the better. This indifference must and will, with due perseverance, be overcome; and as soon as he perceives any amendment, he will enter with alacrity and zeal into the plan and practice.

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ART. II.—*Origin of the Great Epidemic of* 1855. By J. W. SCHOOLFIELD, M. D. of Petersburg, Va. (Concluded.)

So far, we have made no reference to the cases occurring among the crew of the Ben Franklin, because our argument did not require us to do so. Our position required us to show, "that the yellow fever would have visited Norfolk and Portsmouth, even if that steamer had never reached their shores." When we cite cases, as we have done, appearing in the very first days of the epidemic, which cannot be traced to her, we think that we have done all that is necessary to the establishment of our position. If those already referred to have not been sufficient to that end, we think that all cause for skepticism will be removed, after reading the account of the first cases in Norfolk, for the history of which the committee have our thanks.

The man Montgomery, who died in Barry's row on the 2nd day of July, was a victim to yellow fever. The opinion of Dr. Constable, pronounced at the time, on a view of the body, and the silence of the committee, are conclusive.

We were led to believe that Master Williams, who was taken sick on the 24th or 25th of June, died of yellow fever. Soon after the termination of the case, we conversed with the attending physician in relation to the case, and our impressions were formed in consequence of what we learned from him. He may have changed his mind since then; but, certainly, when we talked with him about it, he had *very* little doubt of the nature of his illness. Such is our recollection of the matter.

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Just at this point we would digress from the line of our argument, for the purpose of calling attention to the singular fact, that the *first case*, that of Mrs. Fox, senior, occurred in a house where her daughter had suffered under the same disease in 1853; that Master Williams, who *probably* died of yellow fever, died at his mother's, where the disease had existed in 1852; that Montgomery, whose death occurred on the 2nd of July, fell a victim to the disease in Barry's row, where the disease had extensively prevailed in 1854; and that Mrs. Cusack, who the committee look upon as the first case in Norfolk, had the fever "in the same house in which her daughter had died in 1854." Is the coincidence of the arrival of the Ben Franklin and the eruption of the epidemic more remarkable than these?

Admitting that the first case of fever in Norfolk was that of Mrs. Cusack, in Barry's row, on the 16th of July, and even then the appearance of the fever in Norfolk was *eleven days* earlier than in Portsmouth. *Eleven* days after the first case in Norfolk, Mrs. Robidell is taken with the fever in Portsmouth. This is a most significant fact, and tells with crushing force against the theory of the committee. In the practice of Dr. Upshur alone, there had been in Norfolk, up to the 30th of July, "sixteen cases of fever, all in Barry's row," while in the whole of Portsmouth, for the same time, even including those undoubtedly contracted in Gosport, there had only been *five* cases. And "Mrs. Cusack had not been to Gosport, nor indeed out of her house for several weeks." Another significant fact!

It will be well to look at the local circumstances surrounding Mrs. Cusack. She lived in Barry's row, a second Irish row, which consisted of half a dozen or more three-story brick houses on the east side of Church street, between Union and Water streets, occupied almost exclusively by Irish, who lived in the crowded and dirty state so common to persons of their class. The ground upon which these buildings stood was formerly covered with water, and has been filled up within the last twelve or fifteen years.

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The houses were badly built, and had settled a good deal, so that, after the street was paved, the basement floor was below the level of the side-walk. In wet weather, the water under the floor rose up to, and even above the planks, and mixing with the slops and dirt from the houses, furnished a suitable nidus for the origination and propagation of any pestilential disease." After this graphic description of the location, where the fever first appeared in Norfolk, it would seem almost impossible for the committee to go from home to seek the origin of the epidemic; and yet with the exception of Dr. Williman, they all ascribe its outbreak to a "material cause which was transported by the wind directly from Gosport, or the Ben Franklin," (recollect, the Ben Franklin had left Gosport eight days before Mrs. Cusack was taken sick,) and found a suitable nidus for its further development in the low, dirty habitations of Barry's row. "This pestilential wind, bearing disease and death to Norfolk, (and *particularly to the poor Irish in Barry's row,*) passes over Portsmouth and Washington Point, on its way to Norfolk, 1.07 miles distant, without touching a single one of their inhabitants with its poisonous breath! The first case in Gosport shows itself in Irish row—the first in Norfolk, in Barry's row. Comment is unnecessary.

The explanation of the cause of Mrs. Cusack's illness, given in a note to the report, by the dissenting member of the committee, is equally harmonious and satisfactory with that of his confreres—and not a whit more so. He thinks it "likely that either the ferry steamer, (plying twice daily between the original seat of the disease at Gosport, and the vicinity of Barry's row,) or the workmen on board of her, acted as the communicating agent." He has no confidence whatever in the *wind theory*, on which his colleagues so confidently rely, but substitutes one equally improbable. There were four times as many men residing in Portsmouth and working in the navy yard as there were in Norfolk. Up to the 8th of July, on which day the Ben Franklin left Gosport, three-fourths of them passed going and returning four

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times daily through this last mentioned place, and numbers of them continued to do so until the 22d of July, when the highway leading to the yard was barricaded by the authorities; and yet there was no case of fever among them. It would indeed be strange, if it should appear that the ferry boat acted as the medium of communicating the disease from Gosport to Norfolk, and yet that no one attached to her, nor any one of those who passed to and fro daily on board of her, took the fever. She could convey the infection 1.07 miles, and yet not impart it to any one in transitu! This hypothesis is hardly worthy of serious consideration.

While on this topic, we may as well say what we have to say in regard to the yellow fever in the vicinity of Fort Hamilton, on Long Island, last summer. The circumstances attending the spread of the disease at that time are relied upon by the committee to sustain their theory of the transportation of the infection from Gosport to Norfolk by the wind. They contend that it was communicated to the shore from vessels at quarantine, and that "when once planted, it continued to spread until frost." If the committee have any authentic account of the New York epidemic, they are more fortunate than we are; but we have in our possession some extracts from the Journal of Commerce, affording information of an interesting character, and pertinent to the subject at issue. That paper says, "The infected district extends from about Fiftieth street, Brooklyn, southerly a mile and a half along the shore to Fort Hamilton. *Its breadth no where has exceeded four hundred feet from the water's edge.* The soil is of clay, hard and cold. Its elevation above the water is from 20 to 50 feet. There are marshes in the woods in the rear, and scattered around it are ponds of water in the depressions of the land, the clayey soil holding the rain until it becomes stagnant. *Fever and ague has always been rife in this district*, and at certain seasons a *very fatal type of bilious fever* has prevailed, with some of the *less aggravated symptoms of the present disease.* Skirting the entrance from the city side to the Narrows, the shore col-

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lects considerable portions of the refuse floated off from the docks of the city, as well as from the shipping anchored in the bay.

A month or more has expired since the yellow fever appeared at Gowanus. During the whole period it has not extended beyond the limits of the district above described. But within that district, the mortality, in view of a comparatively sparse population, has been considerable. Thirty five persons died of the disease contracted there."

Now if this fever was the product of infection carried from the ships lying at quarantine, it seems very strange that it did not extend "beyond four hundred feet from the water's edge." Did the power of the wind to transport infection, cease as soon as it reached the shore? The local character of this epidemic was its most remarkable feature, and might in our opinion be more rationally accounted for than by the *wind theory* of the committee. Might it not with more plausibility be referred to the "marshes in the woods in the rear;" "the ponds of water, in the depressions of the land," where the water had become stagnant, and to the refuse matter which "floated off from the docks in the city, as well as from the shipping in the bay," which the shore here "collects in considerable quantities!" The epidemic extended a mile and a half along the shore, and penetrated only four hundred feet, thus rendering it more than probable that the circumstances to which it owed its origin were persistent and stationary, and not resident in the winds, which were constantly blowing hither and thither.

But to return to Norfolk. How do the committee account for the seizure of "several persons on Queen street about the 10th of August," when the disease had not passed Main street? We do not know any thing about the locale of Queen street, or the history of these cases, and would be pleased to hear something about them from the committee. A close investigation might shed some light on the question under discussion. The fact of their appearance, before the disease had reached Main street, certainly militates against



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the tenth conclusion of the report, which declares, "that starting from a central point, it advanced *steadily* and *regularly* in all directions, until frost." And it confirms a statement, made to us late in July, or certainly before the 3d of August, by one of the gentlemen composing the committee, to the effect, "that there were cases in various parts of the city, not traceable to the Ben Franklin, or to Gosport."

It is useless to pursue this branch of our subject further. One or two more observations, and then we will proceed to the next, and last head of our argument.

In accounting for some cases on board the frigate St. Lawrence at the bight of Craney island, some three or four miles from Norfolk, the committee use this language:

"After the prevalence of the wind from the direction of Norfolk, several new cases occurred, and curiously enough, among those who slept in the uncovered parts looking towards the city."

The question naturally arises, if the infection was strong enough, after a cruise of more than three miles through the air, to affect individuals sleeping on one side of a ship, was it not highly probable, that after gaining a port hole in the ship, it could retain its potence until it reached persons sleeping on the opposite side, considering the additional space over which it would have to travel did not exceed some forty or fifty feet? In the case of Long island, the *wind theory* did hold out about three or four hundred feet; but here it has not strength sufficient to bolster it up fifty.

According to our view of them, a more rational explanation of these attacks is this. They were only met with when the wind was blowing from the direction of Norfolk; that is from the east, or northeast. Now, it is notorious that easterly winds about Norfolk are proverbially cold and damp; and even during healthy years, in the months of August and September, a man sleeping at night exposed to a current of wind from the east, in the vicinity of Craney island, when the St. Lawrence was there lying, would very probably be attacked by fever. And no one knows better than the au-

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thor of the report, that in the neighborhood of Norfolk, in 1855, all fevers, when once established, partook more or less of the character of the prevailing epidemic. Such we presume was the nature of the cases which originated in this ship.

We had thought that the committee had stretched their *wind theory* to its utmost tension, when they made it carry the fever more than three miles to the St. Lawrence, but we were mistaken. They seem only to have been preparing us for greater drafts on our credulity. Miss Taney died at Old Point of yellow fever; and unfortunately for the doctrine of the committee, no Ben Franklin was there, upon which to attach the odium of producing her illness. This, at first sight, would appear to be an awkward dilemma, but it did not prove sufficiently so to embarrass the gentlemen of the Norfolk committee. It would never do for them to admit for a moment that the case originated at Old Point. What, if Miss Taney "had not been off the Point since the commencement of the epidemic," and had "carefully avoided communications with persons coming from Norfolk and Portsmouth." What, if a "rigid quarantine had been kept up since the beginning of August," and persons had been driven from the shore at the point of the bayonet. The disease must have come from Norfolk. It could not have originated at Old Point; and as the "rigid quarantine" excluded from the Point every thing except the air, that must have been the medium of communication. Such is the reasoning of the committee. To admit that it was produced by domestic causes, would be yielding every thing for which they had been contending for nearly two long years—and so the *wind* theory is once more lugged in to account for it; and the suggestion is very modestly made in the form of an interrogatory—"Could the poison have been blown from Norfolk, or floated down with the tide 12 miles, or was it a spontaneous case, originating where it is impossible to imagine a local cause?"

4. At the breaking out of the fever in Gosport the state

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of the weather and of the tides, combined with causes local in their character, were identical with those which existed during the prevalence of the yellow fever epidemic in Norfolk in 1800, and at other places. We will be able to elucidate this subject more satisfactorily, after a description of the locality where the fever first appeared in an epidemic form. Gosport, lying at the southern terminus of the town limits, and separated from Portsmouth proper by a creek some three hundred yards wide, is bounded by the navy yard on the south, and on the north, east and west by the river and a creek, thus giving it a water boundary on three sides. It is an old settlement, and was formerly the seat of a large commerce, but that has long ago ceased, and the wharves have all gone to decay. At its most northerly point is the landing of Gosport bridge, the highway for persons coming from Portsmouth. The soil is light and sandy, and the site flat and badly drained. The creek in the rear of Gosport is shallow, and at low tides the bed, composed of a soft bluish mud, is completely exposed to the sun's rays. Often, when the water has receded from these marshes, the effluvia arising from them are highly offensive. On the borders of the two branches of this creek, which penetrate far into the very midst of the population, fevers of a bilious character prevail to a great extent in the autumnal months.

Among the six hundred individuals composing the population of Gosport, he found a very large portion of the worst residents of the town, of whom the greater number were green Irish emigrants, who had not been there sufficiently long to become acclimated. As usual with people of their class, they were living in small, close apartments, without regard to ventilation or cleanliness. This was especially true of those who lived in Irish row, a block of eight three-story brick buildings, filled to repletion with people regardless of all the comforts and proprieties of life. It is not extravagant to place the number of persons residing in these tenements at over two hundred, at the eruption of the fever. In the basements, dirty and filthy at all times, low groggeries

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were kept, while the back lots, extending to the creek in the rear, were lumbered up with pig pens, stables and other nuisances, in a most intolerably filthy condition.

The ship yard of Page & Allen, at which the Ben Franklin was lying at the time of the appearance of the fever, demands especial notice. It lies in Gosport, and is bounded by the river for about four hundred feet on the east, and Water street on the west. Formerly a large West India trade was carried on here, but now the whole premises are in a dilapidated condition, and are rapidly going to decay. The logs of which the wharf is constructed, are rotten, and saturated with water. The whole surface of the wharf is covered with chips, shavings, &c. On the front the wharf is penetrated by a small dock, now nearly filled up with similar materials. Fronting the river, at only a few feet distance, stands an old three-story brick ware house, which, unoccupied for many years, has recently been devoted to the double use of work shop and stable. The upper stories being little used, are generally kept closed. In the rear of this building, and running along its whole length, about one hundred and fifty feet, with a width of thirty or forty feet, was formerly a dock, having a depth of water sufficient to float lighters and other flat boats. The bed of this dock was soft and muddy. Within the last five years it has been completely filled up with woody matter, the refuse of the ship yard, through the interstices of which the water penetrated at every tide.

At the foot of Randolph street, adjoining Page & Allen's wharf on the south, is yet another dock, differing very little in condition from the one just described. Fronting on Water street are four houses, three of which are occupied as dwellings and boarding houses, and the other as an office. When the fever appeared, about one hundred men were employed at this establishment, most of whom having recently come from the north, were unacclimated.

Such is a correct description of the locality when the fever first became epidemic. Let us see how nearly it re-

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sembled Norfolk at the time, and immediately preceding the eruption of the epidemic of 1800. To enable us to do so, we shall have to make free use of the memoir so often referred to, and also of our Sketch. We regret this the less, because, not having been on sale, many of the readers of the Journal may not have seen it.

We quote now from Drs. Selden's & Whitehead's paper:

"The local circumstances, both permanent and accidental, previous to the appearance of the disease, and during its progress, which have been known in other places to affect the health of the inhabitants," are very interesting, and taken in connection with events of a recent date, well calculated to afford much information.

In giving a description of the city in the year 1800, they say, "The ground upon which the principal part of Norfolk stands, forms a kind of peninsula of an oblong figure, the Main street, ranging with the course of the Elizabeth river, runs along the ridge of this peninsula, forming its longest diameter. It is not paved, nor are any of the other streets or alleys, one small lane only excepted, and the soil being chiefly a red clay, mixed with sand, renders them, in rainy weather, very muddy."

And they go on to say, that "the line which marks out the boundary of Norfolk, on the side near the river, comprehended originally more water than land, on the side of the Main street. In some places the wharves are advanced upwards of one hundred yards into the river as far as this boundary line, in others they are not yet carried so far, while in some parts no attempt has yet been made to disturb the original possession of the river. But that part of the town where the malignant fever principally prevailed, stands entirely on *made ground*, reclaimed from the river by sinking pens of large logs, and filling them chiefly with green pine saplings, which are slightly covered with earth or gravel. In some places large openings are left for the formation of docks; in others, wharves are formed next to the channel of the river, while the more interior parts are still covered with

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water; and, in many others, the lots remain in their original state, so that, from these circumstances and the loose texture of the work, the water of the river penetrates, at every tide, through the whole extent of the wooden fabric, which is thus alternately exposed to the action of the water and air, assisted by the powerful rays of an almost vertical sun."

And again: "The means of ventilation and cleanliness have been neglected, proper places for streets have not been left, and what has been marked out for that purpose, is, in several places, not yet filled up, though the private property around is completely occupied with buildings. In the only tolerable street in this part of the town there are two places, in a very public situation, about twenty yards each in length, and eight or nine in breadth, which have never yet been filled up with other materials than what accident has carried thither, and the filth of the neighborhood, for which they serve as the common receptacle. In these ponds, or rather sinks of putrefaction, though sixty yards or more from the river, the tide ebbs and flows through the open texture of the adjacent reclaimed ground; yet, at low water, they are never entirely dry, but form an agreeable retreat for the neighboring hogs. The effluvia which were exhaled from these and similar places during the warm months of summer and autumn, were indeed highly offensive. The malignant fever first made its appearance about twenty yards from these offensive pools, in a wooden house resting upon logs, the ground under it not being raised to the level with the adjacent land, and which was always partly covered with water, and completely overflowed twice in twenty-four hours by the tide."

According to the same authorities, the spring and summer of that year were remarkable for the high degree of heat which characterized them. As early as April the thermometer of Fahrenheit had marked 90°, and about the 20th of June it had become steadily hot, and so continued until after the middle of August, with little variation. Their remarks in

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relation to the course of the winds are particularly interesting, when viewed in connection with the meteorological table for June and July 1855. How marked the similarity: "Southerly winds prevailed, which were always light, and often interrupted with calms; nor did we once experience, during that period, the northwest wind, which usually succeeds rains and tornadoes at this season; which proves so refreshing and invigorating, and which suspends for some time the too powerful influence of the sun in a sultry climate. Rains had been very frequent in June and July, but instead of cooling the atmosphere, it was observed that they were invariably followed by more intense heat. For more than two months after the 25th of June the inhabitants of Norfolk lived in an atmosphere heated above the 85th degree of Fahrenheit—sometimes to the 94th and 95th, but very frequently upwards of 90 degrees."

Just so was it in 1855. There had been frequent falls of rain in April and May, according to our recollection, though the committee assert the contrary, and cite the register kept at Old Point to sustain them. This may be good evidence, but it is not conclusive, for Old Point is some fifteen miles distant from Portsmouth. The amount of rain falling there may have been much less than that at the latter place. Not having any record to refer to, we gave our statement from memory, and still think that we are correct. A long dry spell, terminating in a season of sultry heat succeeded. As early as June 6th, the thermometer marked 80°, and on the 7th it had gone up to 84°. After the 14th the heat was almost stifling, and at some period of every day for the remainder of the month, it was as high as 80°; for eleven days of the sixteen it reached 85° and upwards; and for the four last days of the month it was respectively 89°, 92°, 92° and 92°. During July the heat exceeded that of June. At 3 P. M. the range of the thermometer averaged 88½° for every day in the month. There were only four days, on which, at 9 A. M. or 3 P. M. it fell below 80°, while there were

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thirteen on which it went to 90° and upwards. From the 17th to the 21st it averaged 94°, and from the 24th to the 30th, 93½°.

The winds were almost invariably from the south or west, and only blew in June from the northwest on the 4th and 10th, up to which time there had been no case of fever. The breezes were generally light, and after these were calms for several days in succession. Excepting the 9th, 11th, 16th and 17th of July, when it was from the northwest or northeast, the wind blew constantly during the whole month from the south or west, and for days in succession it continued to blow from the same quarter. From the 18th to the 30th of June, with the exception of the 19th, 20th, 21st and 24th, when it was either from the southwest or calm, it was from the west, and for the first half of July, except the 9th, it was from the southwest or south. For twenty-three days in this month it was from the southwest, two from the south, one from the southeast, one northeast and one northwest. On two days calms prevailed.

In consequence of this long prevalence of southerly winds, the water was nearly all blown out of the river, and the tides made remarkably low, thus causing the beds of the numerous creeks, and the shores of the river as well as the marshes to be entirely uncovered with water for the greater part of every day, by which the exhalation of effluvia was most actively promoted.

To use the language of Drs. Selden and Whitehead—"Such a long spell of intensely hot weather is not, we believe, within the remembrance of any one now living in this place; and its effects on the health of the inhabitants must, of necessity, have been very considerable."

The arrival, on the 21st, 22d and 23d days of July, of three vessels from the West Indies, loaded with fruit, is recorded by them. Their cargoes were in a very bad condition. A large portion of the oranges and limes of which they consisted were in a state of putrefaction, and were, in that state, landed at Commerce street wharf, about sixty yards



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from the pools or ponds above described. The casks were opened and picked on the quay, and the rotten fruit, and the materials with which they were packed, left on the same spot for many days. The smell arising from this filthy mass of vegetable matter was highly offensive. "Two young gentlemen employed in a vendue office at the spot where the fruit was landed, and by whom it had been picked and repacked for public sale, and near the window of whose chamber the above mentioned putrid vegetable mass had been for some time lying, were the first attacked on this street, on the 26th July; and both dying with the usual symptoms of yellow fever, in its most malignant form, occasioned no small apprehension. Several, indeed, had died *some days before*, after a short illness; but these being mostly sailors, in obscure boarding houses, and not regularly attended by any physician, had drawn but little attention."

The ships from the West Indies, alluded to by them, arrived on the 21st, 22d and 23d of July; but several had died *previous to the 20th.* So, although the nature of their cargoes was such as would add fuel to the flames, yet it could not be said that they originally kindled the fire. These first cases, like those to be referred to hereafter, as occurring on the 24th and 30th June last, did not create much alarm. But when others of a type more decidedly malignant, as Carter's, on the 8th of July, presented themselves, a most profound sensation ensued.

On the 22d July, before any suspicions of the presence of a malignant epidemic were entertained, Dr. Selden was called to see Thomas Bailey, a sailor, then in the third day of his sickness. "His eyes were much inflamed, and watery, his tongue moist and furred, and his countenance expressive of great anxiety and distress. He was *extremely restless*, and complained of intolerable pain over his brows, great *oppression about the præcordia*, and a sensation of burning in the region of the stomach. The heat of body was much increased above the natural standard, his face was flushed, and his pulse was more remarkable for frequency than strength."

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In spite of active treatment, the burning sensation about his stomach was more aggravated, the vomiting became incessant—the matter thrown up being of a dark color—the strength sunk rapidly, while the skin assumed a yellow hue, and the disease hastened to a fatal termination, with symptoms unusual to the febrile diseases of ordinary seasons.

The case just described, like that of Carter, in the minds of the public, marked the beginning of the epidemic. In a few days the cases became more and more numerous, and every physician had more or less of them on his lists. Those first attacked had the disease in its most violent form, and many of them sank under it. In the vicinity where it originated the business houses were pretty soon closed, and in less than a week, intent on seeking a place of safety, a large number of the citizens of Norfolk fled the city.

Instead of occurring *anterior* to the arrival of the ships from the West Indies, suppose the case of Bailey had not presented until *after* they had reached port, how soon would the whole odium of introducing the epidemic have been cast upon them!

The local causes attending the epidemic of 1801 were, according to the published account of the same gentlemen, very similar to those of the epidemic of the preceding year. The editor of the Medical Repository, referring to it, (vol. 1, p. 241,) says "the disease appears to have originated indisputably in local causes."

We will briefly refer to the local causes attending the yellow fever epidemic in Baltimore, and then bring this article, already grown beyond the proper length, to a close.

There were sufficient sources, from which the disease might have been derived, without going beyond the limits of the city to hunt them up. "The first persons who sickened had no communication with vessels engaged in foreign commerce, but were exposed to powerful local causes, and were attacked at such distances from each other as to preclude the probability of any one of them having derived it from the other."

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Numerous cases, which occurred before the fever became general, are referred to particularly by them, and which they endeavored in vain to trace to any vessels engaged in foreign commerce; but in all these cases there had been exposure on the part of the patients to causes of a local nature sufficiently powerful to produce the disease. A large proportion of them made their appearance in the vicinity of the cove at Fell's Point, to be described hereafter. The medical gentlemen composing the committee, looked upon the low marshy ground in the vicinity of the "Point," as furnishing the principal sources of the malignant disease of that year. It is described by them as follows: "The cove, which extends from the mouth of Jones' falls to the interior parts of Fell's Point, the *bottom of which was left bare by the recess of the tide*, for some weeks immediately preceding the epidemic appearance of the fever. This was occasioned by the prevalence of north and east winds, which continued a great part of the summer, as may be perceived from a register of the weather during the season. Such is the situation of this pestilential cove, that all the filth conveyed into it by the west, northwest and south winds, must remain to stagnate and putrefy under a summer's sun." The physicians living on the Point concurred in the opinion that the disease begun on the borders of this cove, the condition of which was so offensive as to affect persons who had occasion to pass that way. The faculty looked upon the "*docks* in general, but more especially the *interstices between the wharves*, where the water stagnated, and afforded a proper matrix for the generation of pestilential effluvia, as other very important sources of infection. And, also, stagnant water in cellars and gutters, filthy alleys, and *unpaved streets*, ponds, and low grounds, and particularly the '*made ground*' of which the wharves and lower parts of some of the streets are formed."

We have finished the task which we proposed at the beginning of this article. With an earnest wish to arrive at the truth, it was undertaken and carried out. We have endeavored to show that yellow fever *has prevailed at Nor-*

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*folk when there were no infected ships by which it might have been imported; that infected ships had frequently visited the port, and that no epidemic spread from them; that the first cases of the fever of* 1855 *could not be traced to the Ben Franklin; and that the circumstances attending the disease, when it was endemic, were identical with those existing in connection with the origin and progress of the great epidemic:* with what success, we leave the public to decide.

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ART. III.—*Operation for Removal of a Coffee Bean from the Meatus Auditorius Externus.* By E. P. MORONG, M. D. Baltimore, Md.

MR. W**** applied to me August 22d, to remove a coffee bean from the ear of his child, a little girl two years of age. Three days previously, while playing with some raw coffee beans, she put one into her right ear. The father attempted to remove it, but his efforts only served to push the bean deeper into the meatus. I made no attempt to dislodge the bean on that day, as it was dark and cloudy, but appointed the operation for the following morning. I was kindly assisted by Dr. C. H. Pick, the family physician.

The child being etherized, and the canal brought fairly within the field of the speculum, under a strong direct sunlight, the bean was seen at the bottom of the external meatus, its convex side resting against the membrana tympani.

The membrane of the canal was swollen and thickened, so as to overlap the edge of the bean; and every attempt to introduce between the bean and the side of the meatus a small steel probe flattened at one extremity and the point slightly curved, was found to be impossible. The coffee bean itself had increased to one-third more than its natural size, as was afterwards proved by soaking some beans in water for forty-eight hours. Finding my efforts to remove

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the offending body with such instruments as I had with me ineffectual, no further attempt was made until the afternoon. In the mean time I obtained from C. C. Reinhardt, instrument maker, a metallic drill and a strong steel probe, such as dentists use in cleansing the cavity of a tooth, its point being bent at right angles to the shaft. The child being placed in position and the parts brought fairly into view, I introduced the drill to that portion of the bean which presented itself nearest the external opening of the meatus, in a direction diagonally across the canal from above downwards, in order to avoid injuring the membrana tympani as the drill passed through the bean.

The process of drilling was soon accomplished, and the probe securely fastened behind the bean; but so firmly was it held in place, that no force which I deemed advisable to apply, would move it in the slightest degree. A cessation of hostilities was therefore made until the next morning. I then ordered of Mr. Reinhardt two or three metallic drills of various sizes, the largest being very nearly equal in diameter to the canal. With the aid of these the bean was slowly and cautiously reduced to a thin shell. Its walls were then broken in, and the fragments readily removed with a Wild's forceps. Slight otorrhœa supervened, but was checked in a few days by astringent injections.

The hearing distance was natural when I again saw the child, two weeks afterwards.

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## Art. IV.—*Analysis of Wood's Case of Labor.* By H. C. Robinson, M. D. Fayetteville, N. C.

The November issue of the Journal contains the details of a case of labor, reported by Dr. W. L. Wood of Virginia, which was characterized by symptoms, obscure as to their proximate cause.

In the conclusion of his article, the author expresses him-

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self at a loss for the proper diagnosis, and invites an opinion relative thereto from some of his professional brethren.

While reading the report, the case seemed to us susceptible of a plausible if not entirely satisfactory solution, and, as it may have escaped the author's attention, we ask its insertion in the Journal, as a medium of communication.

Was it not a case of polypus or fibrinous concretion in the heart? Would not this supposition explain the symptoms which are otherwise obscure? With due deference, we venture the opinion that it would, and shall briefly indicate the reasons upon which it is based.

We are well aware that there has long been a *quæstio vexata* in pathological anatomy as to the existence of fibrinous concretions—some contending that such formations never occur, save as the result of a change *in articulo mortis*, while others, equally good authority, urge, as we conceive, with greater show of reason, that it does exist as an idiopathic affection. Laënnec who, with a host of other able pathologists, belongs to the latter class, says, "Nothing is more probable than that the blood may coagulate during life, in the heart also; more particularly, when the circulation is performed in an irregular and imperfect manner."

M. Andral, in his remarks upon the pathology of the blood, has the following:

"The force that tends to keep the globules of fibrine at a certain distance from each other during life, may be so modified, as that they shall have a tendency to run together, as they naturally do after death; and hence may result the spontaneous coagulation of blood in its vessels during life. There have been too many cases of this nature observed, for us, at the present day, to attempt to deny the possibility of its occurrence."

Having thus fortified the position that such concretions may occur, let us glance at the prominent features in the case as reported, and see if the predisposing and exciting causes, as well as the symptoms, do not point to this as a probable case of the kind. The facts were briefly these: Mrs. ***, aged 35, in her fifth confinement, after four hours'

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labor, gave birth to a healthy child. "The birth was attended with a considerable gush of blood," which, however, was speedily checked. After sleeping an hour or two she sat up, and while taking a cup of tea, became faint, "but was relieved by resuming the recumbent position." She did well on the two following days, but on the third day complained of a sense of oppression about the præcordia, accompanied with shortness of breath, which, notwithstanding appropriate treatment, grew rapidly worse, and death closed the scene.

The only untoward symptoms developed, it will be observed, were—1st, hemorrhage; 2d, slight syncope; 3d, præcordial oppression, with dyspnœa.

Are not these related, *seriatim*, as cause and effect? Was not the syncope induced by the hemorrhage and the posture of the body, and did they not jointly effect the deposit of coagulum in the heart, which produced præcordial oppression and death?

It is a well attested fact, that the loss of a portion of the circulating fluid renders that which remains more coagulable. Indeed, it is by the aid of this principle that nature occludes bleeding orifices. Syncope also is another powerful coagulator, and hence, in internal hemorrhage, the surgeon attempts by every means its induction. An altered quality of the blood is still another predisposing cause. In the latter stages of pregnancy, and for a while after parturition, the relative proportion of fibrine in the blood is materially increased, and a condition of hyperæmia exists. Upon this point Messrs. Jones and Sieveking remark: "It is very conceivable how anæmic blood, with its vitality generally lowered, and especially deficient in the organized living cells, shall tend, particularly when it is propelled in a sluggish current by a languid heart, to pass into that condition which it spontaneously assumes, when withdrawn from the influence of the living tissue; and it is very manifest how important it is to be aware of the tendency which exists to such an event, and, if it occurs, to appreciate its real nature, and not to regard it, as might easily be done, as the result of

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inflammation." The probable condition of the patient in this case would seem favorable to such formation, and the fatal symptoms, præcordial oppression and dyspnœa, are just such as would result from mechanical impediment to pulmonary circulation. It seems to us reasonable to believe that the formation of the deposit was cotemporaneous with the sensation of faintness, though it may be urged as an objection, that the time intervening was too great. True it may have occurred subsequently, but it may readily be conceived while the faintness existed, the heart's action being sluggish or perhaps partially suspended, that "the blood, retained after the systole in the ventricle and impelled into the network of columnæ carnæ, acquired the opportunity to coagulate, and, one fixed point being given, it is easy to understand how constantly fresh deposits are made on the surface." While the deposits were small and did not obstruct the circulation, they gave rise to no unpleasant symptoms; but as they grew by accretion and opposed the currents, they induced dyspnœa, and finally death.

The history of this case, with all others of a kindred nature, is mournfully instructive. It furnishes another evidence of the necessity of the recumbent posture, and the avoidance of every effort on the part of the parturient woman for days, perhaps weeks. Especially is this important, if much hemorrhage has occurred. Dr. Meigs, if we recollect aright, is the only obstetric author who mentions the danger of "heart clot," from too early sitting up. When the mischief is done, we fear that our art can do but little towards its eradication. Perhaps, however, by sustaining the system with tonics and stimulants, while at the same time, we essay the use of such remedies as are likely to remove the fibrinous condition of the blood, we may afford relief. We have found the chlorate of potass. relieve symptoms of badly ærated blood, and perhaps it might subserve a good purpose in this affection. The suggestion is made in no dogmatical spirit, and must pass for what it is worth.



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# SELECTIONS.

*Chemical Final Causes—as illustrated by the presence of Phosphorus, Nitrogen and Iron in the higher Sentient Organisms.* By George Wilson, M. D., F. R. S. E., Regius Professor of Technology in the University of Edinburgh.—From Edinburgh Essays. (Continued.)

## *II.—Phosphorus in the Human Organism.*

If the imperfect description which has been given of the human organism is in any respect faithful, it is manifest that the chemical elements which enter into its composition must exhibit the contrasted stability and mobility which so strikingly characterize itself. Suppose, then, our physiologist's pupil, guided by this rule, to study the chemist's elementary bodies, with a view to discover which of them are most suited to the living frame. Is it likely that among the sixty he would select only seventeen? that he would select the actual seventeen which are found? that he would even prefer nonmetallic to metallic matter? or assign any place to abundant constituents, such as the metal of lime, or to never failing unabundant ones, as fluorine? He would probably select air and water, but beyond these I feel quite unable to surmise how far his Frankenstein would agree in composition with the homo sapiens of Linnæus. At all events, the chances are very great that he would pass over entirely that remarkable group of elements, in which two of the most characteristic ingredients of all animal organisms are included. This group contains four bodies, phosphorus, arsenic, antimony, nitrogen, with an outlying fifth one, bismuth, which I do not at present consider; and, in the whole category of elements, no four at first sight seem more unfitted for organismal constituents than they. Phosphorus has been known for two centuries as a dangerous combustible, and most deadly poison, which the recent sad, and often fatal experience of the lucifer match makers has shown to possess a peculiar antipathy to the bones, for when it can reach them, as it can those of the jaws, it rots them away. On the poisonous properties of arsenic it is quite needless to dwell. Antimony, or anti-monk, betrays in its name a deadliness to man, akin to that of its name sister, monkshood, a

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still more potent killer; and for both, all men are monks. Nitrogen, on the other hand, has seemingly no properties at all; a light, thin, tasteless, insipid, insoluble, incombustible gas, to appearance good for nothing, and as such fitly symbolized in chemical tables by the letter N. Two murderers, a dangerous mediciner, and an incapable, are surely not the parties to whom any one would propose to entrust our lives? Yet the fiery phosphorus and the negative nitrogen, are the two elements which, by their greater abundance in animals, and the part which they play there, most strikingly distinguish animals from plants; and they are specially important in relation to the human organism. When, moreover, we study those two elements more particularly, they singularly change characters; phosphorus, on a closer acquaintance, proving to be a very healthful and friendly occupant of the body. Nitrogen prone to conceal under its look of helpless indifference the most energetic powers of making and marring, so that when occasions call, it proves better at killing and slaying than any one of its more demonstrative brethren.

Into a more detailed consideration of these elements I will now enter, in the hope of showing, that though we might not have anticipated their presence in our bodies, we can point out many reasons why they actually are there. First of phosphorus. Its importance to the human organism is shown, 1st, by its invariable presence in it; 2d, by the abundance of its presence; 3d, by the universality of its presence; 4th, by the diversified manifestations of its presence; 5th, by the active part which it takes in the most energetic vital processes, such as absorption, secretion, nutrition, reproduction, sensation, emotion, and all the other forms of nervous or cerebral action; 6th, by the invariable loss of health which attends its withdrawal from the body; 7th, by its efficacy as a restorative. A substance which is alike present in the hardest bone and the most pulpy nerve, which occurs in one form or rather series of forms in the blood, in another series in the flesh juices, in a third in the milk, in a fourth in the brain, and probably in other modifications elsewhere in the organism, and which is associated with all its critical changes, must be pre-eminently serviceable to the body.

Phosphorus occurs in all organisms chiefly as phosphoric acid, in union with water, with mineral and organic bases, with fatty bodies, and in other forms of organic combination as yet little understood. The following exposition of the properties of the element and its chief organismal compounds may illustrate why it is so serviceable to the body.

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I. Phosphorus is remarkable for the Protean shapes which it can assume. Some elementary bodies, such as gold, are familiar to us in one form, and that so beautiful that we are not curious to enquire whether the metal can assume other and less noble shapes. In truth we have but recently fully realized that a multitude of the chemical elements can masquerade in disguises, through which we with difficulty realize their individuality. Among those masquerades a first place must be given to the element under notice.

Since about 1660 we have been familiar with phosphorus as a soft semi-transparent nearly colorless wax-like substance, possessed of a glassy structure, exhaling in the air an odor of garlic, shining even at the freezing point of water, melting a hundred degrees below the boiling point (111°5 F.) of that liquid, bursting into flame in the air at a temperature a little higher, and yielding a thick white smoke condensing into a snow of phosphoric acid. This form of the element we have learned to distinguish as vitreous phosphorus. It is so inflammable, that it can be preserved with safety only under water, and there is scarcely a chemist who has not been in some degree a martyr to its flames. It is so poisonous that not a year passes without some poor child falling a victim to the minute portion which it thoughtlessly eats from a lucifer match, and without some uncautioned lucifer match maker suffering the prolonged tortures of slow poisoning, which its daily administration in infinitesimal doses infallibly occasions. It reacts so powerfully upon the air in which it is permitted to fume, that it changes its oxygen into the energetic, oxidizing, deodorizing and bleaching agent which is known as ozone. In a word, it exhibits in an intense degree an affinity, or tendency to combine, alike with metals and non-metals, and strikingly alters each by its union with it.

In so far, then, as mobility, or susceptibility of various change is concerned, no one will question the fitness of phosphorus to become an organismal element. But till recently we had not discovered that it can change this mobile, restless, agonistic condition, for one of passive indifference and great stability.

Recent researches have shown that vitreous phosphorus is susceptible of no fewer than five modifications.

1st. It may be altered from the glassy to the crystalline condition.

2d. By exposure under water to air and light, it becomes a *white*, opaque, sparingly fusible body.

3d. By fusion and sudden cooling at a comparatively low temperature, it becomes *black* and opaque.

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4th. By elevation to near its boiling point, and sudden cooling, it becomes viscid like sulphur in the same circumstances, and retains for a considerable period a consistence like that of caoutchouc.

5th. By exposure to the rays of the sun in a vacuum, or in a gas free from oxygen, or in water free from air, and excluded from air, it changes into an amorphous *red* solid.

Thus we know phosphorus as

1. A symmetrical crystal.
2. A true vitreous body, or glass.
3. A soft elastic substance like caoutchouc.
4. A white amorphous solid.
5. A black amorphous solid.
6. A red amorphous solid.*

The crystalline phosphorus and the vitreous closely correspond in chemical characters, and we know little of the elastic, the white and the black varieties; but the possibility of producing them illustrates how susceptible phosphorus is of many modifications, and in the red amorphous modification we have an indifferent form of the element, so unlike that in which we are accustomed to see phosphorus, that though it has been in the chemist's hands for more than a century, he has only very recently recognized that it is phosphorus.

It is now, however, manufactured on the large scale,† so that its properties may be stated and illustrated in full. It is neither crystalline nor glassy, but amorphous, and heavier than the familiar forms of phosphorus. It does not shine at the heat of freezing water, nor melt even at that of boiling water. It exhales at ordinary temperatures no vapor and no odor, nor does it become oxidized in the air, or change it into ozone. It is not poisonous even when directly administered in doses a hundred times greater than those which are fatal with vitreous phosphorus, and it may be handled with impunity. Towards other elements it shows in general a singular indifference, nor is it till we raise it to the temperature of 500° F., some 470° above the heat necessary to make vitreous phosphorus begin to burn, that it starts into

* See Gmelin's Handbook of Chemistry, Cavendish Soc. Trans., article Phosphorus. Prof. W. A. Miller's Chemistry, vol. ii. p. 593. Graham's Chemistry, vol. i. p. 431.

† Messrs. Albright, near Birmingham, have for the last five or six years prepared red phosphorus according to Schrötter's process, which they have patented. I am indebted to these gentlemen for the opportunity of examining large specimens of this important substance, which promises, by its comparative harmlessness, to render the manufacture, use and carriage of lucifer matches much less dangerous than they are at present.

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activity, bursting into flame, and yielding phosphoric acid. It appears to owe its peculiarities to the presence in it of much latent heat, so that it differs from vitreous phosphorus, as steam does from water, and water from ice, for it is most easily produced by long maintenance of the common phosphorus at a temperature below 490°, and when heated above this point it suddenly bursts into vapor, changing with evolution of heat into the familiar modification of the element. But it can be produced by a brief exposure of the vitreous phosphorus to light, in a vacuum or nonoxygenous atmosphere, and when common phosphorus is kindled in air, it always changes in part into the red amorphous modification, which remains when the nonamorphous portion has burned away; and some interesting researches of Professor Brodie appear to prove that the change may attend the combination of phosphorus with other bodies.

Here then is an element which can imperceptibly and quickly pass from a condition of great chemical activity to one of great chemical inertness. I suggest this susceptibility of change as one reason why phosphorus is a predominant organismal element. Without insisting on its sixfold mutability, let its two fold mobility, of which we are quite certain, be kept in view. Phosphorus, in virtue of this, may follow the blood in its changes, may oxidise in the one great set of capillaries, and be indifferent to oxygen in the other; may occur in the brain in the vitreous form, changing as quickly as the intellect or imagination demands, and literally flaming, that thoughts may breathe and words may burn; and may be present in the bones in its amorphous form, content, like an impassive caryatid, to sustain upon its unwearied shoulders the mere dead weight of stones of flesh.

And what is said here of the brain, as contrasted with the bones, will apply with equal or similar force to many other organs of the body. All throughout the living system we may believe that phosphorus is found, at the centres of vital action in the active condition, and at its outlying points in the passive condition. In the one case, it is like the soldier with his loaded musket pressed to his shoulder, and his finger on the trigger, almost anticipating the command to fire; in the other it is like the same soldier with his unloaded weapon at his side, standing at ease.

Phosphorus will react also on other bodies, according to its own condition; and as it appears that vitreous phosphorus not only oxidises with great rapidity when it encounters air, but at the same time changes that air in part into ozone, i. e. greatly exalts its oxidising power, it will be seen that the

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quick oxidation of phosphorus within the organism may often imply the simultaneous quick oxidation (through the ozone it generates) of all the surrounding oxidable substances.

It is premature to speculate on such matters, but it is desirable to notice emphatically, that physiology has not yet recognized the importance of that susceptibility of molecular change which chemists specify by the name of "Allotropy." It increases alike the difficulties and the resources of biology. Hitherto, we have begun with each element as if it had one narrowly defined set of sensible characters, which we have briefly enumerated; and thereafter we have proceeded to consider its chemical compounds, with the exposition of which our zoo-chemical demonstrations have commenced. But now it appears that what we regarded as the basement floor, level with the ground, was at least one story above it, and when we dig away the sand, we find vault covering vault, and know not as yet how many stories lie below. Among organismal elements, not only phosphorus, but oxygen, carbon, sulphur, and chlorine are known to admit of molecular modifications. The tendency, indeed, of discovery is to show that every chemical element is in this predicament, for every day adds to the number of allotropic substances. Moreover, we can confidently affirm, that when they enter into combination, the compounds which they form often reflect the image of the modification which characterized the element at the moment of its combination, and that we may have oxides, for example, of the same composition (so far, at least, as ponderable constituents are concerned), yet very different in property.

As pre-eminent among the possessors of this variability, phosphorus is more suitable than any element we yet know, to minister to the unchanging change of the living body.

It is not, however, as elemental phosphorus, intricately combined with organized molecules in ways which the chemist cannot interpret in his study or imitate in his laboratory, that this organismal constant chiefly occurs. As already stated, it is present in living bodies chiefly as its highest oxide, phosphoric acid.

When a bone is burned to whiteness in the open air, it yields a crumbling chalk like solid, significantly called bone earth, of which the larger part is lime, whilst the remainder is in great part phosphoric acid. This acid can be separated from the bone earth, by pouring oil of vitriol upon it, and its properties as the dominant acid of all the higher sentient organisms, are now to be considered.

Phosphoric acid has all the properties of the most power-

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ful acids. It dissolves in water. It is intensely sour. It reddens all acidifiable vegetable blues. It perfectly saturates powerful bases. In these respects it agrees with sulphuric, nitric, hydrochloric, and acetic acids. But from all other acids possessing such properties, it differs in several singular ways, and these differences point to the cause of its organismal pre-eminence.

The first remarkable difference is its freedom from corrosiveness. The acids named above, even when considerably diluted with water, rapidly disintegrate organic bodies, and in their strongest aqueous dilutions, act like hot irons on the skin. A drop of oil of vitriol, or of the strongest aqua fortis, burns the flesh like a live coal, and unless mingled with much water, excites painful and dangerous inflammation of the tissues. But the phosphoric acid extracted from bones, even when combined with a chemical minimum of water, and concentrated into a crystallisable hydrate, may be spread for a considerable time over the thinnest skin of the living body without burning, paining, or inflaming it.

It is thus of all the strong acids we know, the only one which can be set free, and that in a concentrated form, within living organisms, without causing their destruction. In this peculiarity I find one cause of its universal presence in the body; for whatever services an acid can render to an active organism, phosphoric acid can render to the full without harming it.*

A second peculiarity of the phosphoric acid is, that unlike the majority of equally strong acids, it does not coagulate albumen. And as this substance, familiar to all in white of egg, is largely present in the flesh, the natural juice of which contains partially neutralized phosphoric acid;† and is also largely present in the brain and nerves, associated with a modification of the same acid known as oleo-phosphoric acid; we can affirm at least that the solitary potent inorganic acid compatible with the noncoagulation of albumen, is the only one found in a free (or at least partially free) state, in association with the liquid form of that important organismal constituent. These peculiarities, however, are as nothing compared with the third, which calls for special notice. The majority of acids which are soluble in water exhibit their characteristic properties most markedly when associated with

* It seems worth the consideration of surgeons, whether common phosphoric acid, in virtue of its unirritating action on living tissues, and its solvent action on phosphatic calculi, may not as a *litholytic* be brought in direct contact with vesical concretions of the nonacid class, and render in some cases operations unnecessary.

† The tribasic, acid phosphate of potash (2 HO. KO x PO 5.)

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the chemical minimum of water which can combine with them, and when more water is added, they show in a less degree, according to their dilution, such qualities as sourness, power to alter vegetable colors, and to saturate bases. There is thus but *one* sulphuric, or nitric acid. The less water united with either, the more powerful it is, and the greater the weight of base it can neutralize. In the language of quantitative chemistry, one equivalent or chemical unit of nitric acid can combine with one equivalent of a base, neither more nor less. This is the general rule. One unit by weight of an acid unites with one unit of base, and here the neutralizing power of the former stops, so that as dilution by water implies the spreading of the efficacious unit over a wider area, a given weight of diluted acid must neutralize a smaller weight of an undiluted base than the same weight of stronger acid will neutralize. Hence, the less amount of water, the greater the acidity of the acid; and unit of acid to unit of water is the condition of greatest strength.

But to this widely applicable rule phosphoric acid forms a remarkable exception. It is most acid when united not with one, but with *three* units of water. In this condition it is extracted from bones, and found (at least after death) in the blood and flesh. One unit of the acid crystallises along with three units of water, and retains these in special combination to whatever extent it is diluted with more water. Its neutralizing power, moreover, is correspondingly threefold, so that, for example, in the bones, one equivalent of it is combined with three equivalents of lime, whilst all the other bone-acids are united in single units, with a single unit of lime. An endless series of salts similar to bone phosphate, but containing other bases than lime, are known to chemists, who distinguish them as a class, as the tribasic phosphates. The organismal importance, however, of this property of phosphoric acid will not appear till we look to a fourth peculiarity which it possesses.

Phosphoric acid has the singular power of dropping or casting off, as it were, one of the three units of water which it is able to retain, keeping only two, and refusing, even though dissolved in volumes of water, to take back the third. In this modification (which is known as pyro-phosphoric acid,) it has not a threefold, but only a *twofold* power of neutralizing bases, so that, for example, as it occurs in burnt bones, one equivalent is united with but two equivalents of magnesia, and an extensive series of corresponding salts is known, distinguished as the bibasic phosphates.

But further: pyro-phosphoric acid can part with one of



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the two units of water which it characteristically retains, as common phosphoric acid can part at once with two of its three characteristic units of water, both becoming, like the ordinary mineral acids, a compound of unit of acid to unit of water, with a onefold power of neutralizing bases. This modification has been called meta-phosphoric acid. It also forms a large series of salts all containing one equivalent of acid to one equivalent of base, and distinguished as monobasic phosphates.

Meta-phosphoric acid, unlike the other hydrates of the acid, coagulates albumem. Dissolved in cold water, it slowly takes to itself two additional units of that body; and if boiled with the liquid, it takes them with great rapidity.

We have thus to begin with a snow like soft solid, called anhydrous phosphoric acid, procured by burning dry phosphorus in equally dry air. When we dissolve it in water, it so unites with that liquid as to produce, according to circumstances, three acid solutions, as distinct from each other in all their properties as if they were composed of totally different ingredients. These three solutions, distinguished as common phosphoric, pyro-phosphoric, and meta-phosphoric acids (of which the first two are crystallisable as solids), are mutually convertible by loss or gain of two units or chemical equivalents of water; the first named, which retains three such units, being the most stable, and the last, which retains but one aqueous unit, the least so.* The chief organismal acid is thus equal in powers to three ordinary acids, and strikingly exhibits the quality of mobility or variability, which has been shown to be so essential to the active components of living organisms. Yet triply potent as phosphoric acid is, it does not, in any of its modifications, exhibit corrosiveness or poisonousness. This has already been referred to as characterizing the tribasic acid, but is still more remarkable as characterizing the bibasic and monobasic acid, for the general rule is, that the less the amount of water in a hydrated acid, the more caustic, corrosive, and poisonous

* The three hydrates of phosphoric acid, taken in the same order as in the text, are best distinguished as tribasic, bibasic, and monobasic phosphoric acid, according to the nomenclature of Thomas Graham, Esq. master of the mint, our greatest authority on the subject. On the binary theory of acids and salts, each of Mr. Graham's hydrates is represented as a peculiar hydracid: Thus, tribasic acid, $PO^8 \times H^3$; bibasic acid, $PO^7 \times H^2$; monobasic acid, $PO^6 \times H$. It is quite immaterial to the argument pursued in the text, which of the rival theories of acids is adopted. On both views the same weight of the same three ingredients, phosphorus, oxygen, and hydrogen, is recognized as present: The only matter in dispute is, the mode in which the ingredients are arranged. Mr. Graham's view is preferred as the one more easily followed by those who have not made chemistry a special study.

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it is. But even anhydrous phosphoric acid half-deliquesced, may be kept in contact with the skin for an hour without injury, where the similar hydrate of sulphuric acid would in a few minutes reduce the tissue to charcoal.

The innocuousness, indeed, of the strongest phosphoric acid is, in many respects, as inexplicable as it is paradoxical. Chemists refer the caustic action of strong sulphuric, nitric, hydrochloric, and acetic acids, in great part, to their intense affinity for water, which they compel the organic bodies touched by them to give up, so that their chemical integrity is destroyed. But the water which these corrosive acids take from an organized structure, anhydrous phosphoric acid can take from them. The most caustic acids known to us are probably sulphuric and hydrofluoric acid, but the strong hydrates of both are rendered anhydrous by phosphoric acid, which nevertheless does not possess a trace of their causticity. It has latterly come into extensive and most important use among scientific chemists, as a means of dehydrating or rendering waterless other substances, so remarkably does it excel them in affinity for water, and yet the powers which they owe to such an affinity are not exhibited by it. It is thus a lord paramount among acids, compelling its barons to surrender to it the prey which they have taken from the innocents, but never found robbing the innocent itself.

Limiting our attention to the well known modifications of phosphoric acid, we may sketch in outline how they may render service to the body. The sketch can be only a fancy picture, yet it may be one mirroring and shadowing, however faintly, the reality of nature.

A child is beginning to walk and the bones of its limbs must be strengthened and hardened. Phosphoric acid accordingly carries with it 3 units of lime to them, and renders them solid and firm. But the bones of its skull must remain comparatively soft and yielding, for it has many a fall, and the more elastic these bones are, the less will it suffer when its head strikes a hard object, so that in them we may suppose the phosphoric acid to retain but 2 units of lime and to form a softer, less consistent solid. And the cartilages of the ribs must be still more supple and elastic, so that in them the phosphoric acid may be supposed to be combined with but one unit of base, as the uncrystalline gelatinous metaphosphate.* On the other hand, its teeth must be

* "Von Bibra has made the beautiful observation that those bones which are the most exposed to mechanical influences contain the largest quantity of earthly constituents (chiefly phosphate of lime). The action of this law is manifested even in different families of the same class of animals; thus, for instance, in the

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harder than its hardest bones, and a new demand is made on lime phosphates to associate themselves with other lime salts (especially fluoride of calcium) to form the cutting edges and grinding faces of the incisors and molars. All the while also, the blood must be kept alkaline, that oxidation of the tissues may be promoted, and albumen retained in solution; and yet it must not be too alkaline, or tissues and albumen will both be destroyed, and the carbonic acid developed at the systemic capillaries will not be exchanged for oxygen, when the blood is exposed to that gas at the lungs. So, phosphoric acid provides a salt containing 2 units of soda and 1 of water, which is sufficiently alkaline to promote oxidation, dissolve albumen, and absorb carbonic acid, and yet holds the latter so loosely, that it instantly exchanges it for oxygen, when it encounters that gas in the pulmonary capillaries.

Again: The flesh juice must be kept acid (perhaps as has been suggested, in electro-polar opposition to the alkalinity of the blood, as affecting the transmission of the electrical currents which are now known to traverse the tissues), and phosphoric acid provides a salt containing 2 units of water and one of potash, which secures the requisite acidity. Further: in some of the serous and other liquids of the body, a changeable salt is required; and for this phosphoric acid provides, by combining with soda, ammonia and water to produce microcosmic salt which is alkaline in its integrity, but by parting with the easily lost, volatile ammonia becomes alkaline.*

All those compounds are needed in the adult as well as in the infant organism. With the adult we may further connect such an incident as the fracture of a bone, which is repaired by a beautiful process of splicing, during which phosphates, first very soluble, then moderately so, then slightly so, are finally succeeded by dense insoluble bone-earth, filling up the breach till it becomes the strongest part of the

rasores or scraping birds, the femur contains the largest quantity of phosphate of lime, in the grallatores or waders, the libia, and in all other birds the humerus." Lehmann's Physiological Chemistry. Cav. Soc. Trans. vol. i, 414.

The phosphate of lime in bones was represented by Berzelius at 8 Ca O, 3 $PO^5$; but according to Heintz and Rose it has the composition given previously in the text, 3 Ca O, $PO^5$. In reality, however, neither of these formulæ will always apply to bones, although the latter probably represents the condition of the greater part of their lime phosphate. From my own results, and those of others in the course of agricultural analysis of bone earth, I cannot avoid inferring that several phosphates of lime exist in bones, although in the ash of the latter the nature of these salts as they occurred in the living organism cannot be ascertained. I have felt at liberty accordingly to assume as possible the phosphates, referred to in the text as existing in the child's skull and ribs.

* Lehmann's Physiol. Chem. Cav. Soc. Trans. vol. i, 369.

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reunited bone. And as counterpart of this, we have the most solid bone dissolving under the pressure of a throbbing (aneurismal) blood vessel, which unless the bone gave way would first torture, and then kill the whole body. Particle by particle, the petrified ivory is pressed, softened, melted, dissolved, and washed away by the same potent acid which hardened it from a thin liquid into a compact solid.

At all periods, moreover, in the life of the body, the liquid albumen and fibrin of the blood are becoming solid albumen and fibrin in the tissues. Both are also becoming, in the nursing mother, the casein of her milk, and that casein in her suckling's body is becoming the albumen and fibrin of its flesh and blood, and building up its organs in other ways.

Each of these blood-forming, flesh-forming, milk-forming, tissue-forming bodies, albumen, fibrin and casein, and likewise their analogue gelatine, are inseparably accompanied in all their liquefactions, solidifications, and transmutations by phosphates, which in virtue of their mobility, are able to liquefy, solidify and undergo transmutation as the body which they accompany does. We cannot pretend to follow those changes step by step, for they occur within the inaccessible penetralia of a living structure; but certain it is that the phosphates accommodate themselves to changes which no other salts we know could submit to.

In the particular cases given above, there may be great misapprehension, and even signal error. But in the general estimate of the organismal suitableness of phosphates beyond all other salts, there cannot be much mistake. Chemical unions have been compared to marriages, and chemical compounds to wedded pairs. If the comparison is accepted, then the great majority of mineral acids are monogamists and wedded each to a single base; but phosphoric acid, like an Eastern patriarch, has the privilege if he pleases of wedding three bases, although he is often satisfied with two, and can cheerfully content himself with one. Or, to vary the figure more expressively, the ordinary acids are like the Hindoos under the dominion of caste, and when hired as servants stipulate to carry but one thing, and the minimum weight of that. Phosphoric acid is an English servant of all work, lifting three loads at a time, of any three things that require to be lifted, and willing at all times to make himself generally useful.

Putting all figure aside, we may affirm that no acid is known to us, approaching to phosphoric acid in susceptibility of various modification. Even if we were to suppose, that as a hermit crab tries shell after shell till he finds one

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to fit him, the living organism had made trial in turn of all the mineral acids, we cannot imagine it finally selecting any one but phosphoric acid.

Such are some of the reasons which may be given in explanation of the presence of phosphorus, and especially of phosphoric acid, in the bodies of the higher animals, and in that of man. The subject has been considered purely from a chemist's point of view, without reference to any particular theory of life, or hypothesis regarding the existence or sphere of a special vital force. But nothing is further from my intention than to imply that such a knowledge of the properties of the chemical elements as we can acquire in a laboratory, is sufficient to explain their function as organismal ingredients. It is but one of the data essential to the solution of a most difficult problem; but it is a most important datum, and to the extent that the phenomena referred to in the preceding pages are unquestionable physical truths, they must receive full recognition in every coherent theory of life.

It remains to discuss, from the same point of view, but much more briefly, nitrogen and iron as organismal elements.

# CHRONICLE OF MEDICAL SCIENCE.

## ANATOMY AND PHYSIOLOGY.

1. *Researches on the Histology of the Nervous System.* By Professor N. Jacubowitsch of St. Petersburg.

[This important paper was recently presented to the French institute. We reproduce its conclusions in full.]

For four years past, I have been occupied uninterruptedly with investigations on the histology of the nervous system in general. I have published my results in the Bulletin of the Academy of Sciences of St. Petersburg; I have this year published a treatise* at Breslaw on the same subject; and I

* Mittherlungen über die feinere Structur des Gerhirens und Ruckenmarks von Prof. Dr. N. Jacubowitsch. Breslau, 1257.

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have now the honor of offering to the Institute of France a summary of the results of these four years of labor.

I. The entire cerebro-spinal nervous system (the cord, the medulla oblongata, the cerebrum and cerebellum) and the whole ganglionic nervous system, consist, in general terms, of three kinds of nervous elements: cells of motion, cells of sensation, and ganglionic cells; to which must be added the axis-cylinders of all these cells. The ganglionic nervous system does not constitute a separate system; it belongs essentially to the cerebro-spinal system.

II. A not less important histological element enters largely into the construction of the nervous system; namely, cellular tissue, which not only unites, as a cement, insulated nervous elements in the form of groups which it unites with the different subdivisions of the nervous system; but possesses also an essentially functional importance, since it contains blood vessels, and consequently subserves the most important condition of life, that is, nutrition. It perhaps contributes, by the envelop it furnishes to the axis-cylinders (nervous fibres with double contour, nervous fibres with single contour with or without medulla), to the functions of these cylinders.

III. The medulla spinalis presents a structure varying in its different parts as regards the number and arrangement of its essential nervous elements. These differences of structure accord with the functional diversities of the nerves which arise from certain parts of the cord (for example, the cervical and lumbar bulbs).

IV. An exact knowledge of the regions of the spinal cord must necessarily have a practical application in pathology and therapeutics, and is destined to exert the greatest influence on the diagnosis of nervous affections and also upon their treatment.

V. The medulla oblongata should be considered a continuation of the medulla spinalis resulting from a large development of the posterior cornua and of the cells of sensibility (the olivary bodies, the gray mass in the cuneiform fasciculi), as well as of the ganglionic cells of the spinal cord (usually situated near the central canal and at the termination of the fourth ventricle). The medulla oblongata is distinguished from the medulla spinalis by an almost entire absence of motor cells.

VI. The corpora quadrigemina constitute an immediate continuation of the spinal cord, with which they are connected by the medulla oblongata. They constitute the last region in which all the nervous elements present themselves

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together in their special relations, towards each other, or towards the origins of nerves. The quadrigeminal bodies are distinguished from the great commissure, in which, as an exception, the first species of ganglionic cells is found.

VII. The hore-shoe commissure sends branches of its nervous fibres into the optic thalami and corpora striata, whither they are readily traced on making horizontal sections. On this account, the commissure should be regarded as an essential bond of union between the spinal cord and medulla oblongata on the one hand, and the cerebrum and cerebellum on the other.

VIII. The cerebellum should be looked upon as a subdivision of the nervous system, formed:

1. By a portion of the anterior column and the anterior horns of the cord (which penetrate, for the most part, into the peduncle of the medulla oblongata near the cerebellum) with their motor cells and nerve fibres.

2. By a part of the posterior columns and their elements (cells of sensibility), which are found also in the restiform bodies.

3. By ganglionic cells which, arranged in masses, form, with the elements already enumerated, the medullary or white substance of the cerebellum. This substance is brought into relation with the pons varolii and the quadrigeminal bodies by the peduncles of the medulla oblongata and the peduncles of the corpora quadrigemina.

4. By a gray substance which is the cortical matter of the cerebellum, and which is characterized by its pyriform cells.

IX. The hemispheres, as well as their constituent parts, consist essentially of cells of sensibility with a peripheric layer which is formed, as in the cerebellum, of cylinder-axes ending in obtuse extremities ("*en baguette.*" I name this layer, *couche en baguette*).

X. The substance of Rolando should be considered a pure nervous mass, consisting of cylinder-axes, with or without medullary substance, which exists not only in the posterior horn of the spinal cord, but also in the cerebrum, cerebellum, and corpora quadrigemina, with their fibrous net works and their apparent layers of little granules (rings of simple or double contour, sections of nerve-fibres).

XI. The corpuscles of the conjunctive or cellular tissue that we meet in the central nervous system cannot be ascertained in an absolute manner. The cellular net work appears rather every where under the form of minute granules, assuming, in certain places, the form of a plexus. The

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cellular net work presents, especially in the vicinity of the central canal, a filet-like form; the same is true at the aqueduct of Sylvius, and wherever the vessels are densely accumulated. Often, especially in localities where the axis-cylinders are cemented, it is transformed into an homogeneous, transparent, vitreous membrane, of fine granules, of such minute dimensions that it is extremely difficult to measure them.

XII. All the nervous elements are united in three different modes:

1. By commissures, which connect two groups symmetrically situated by axis-cylinders. Here are to be classed the anterior and posterior commissures of the medulla spinalis, the commissure of the cerebellum, and the horse-shoe commissure in the corpora quadrigemina; also the commissures of the sensory and ganglionic cells in the spinal cord.

2. By unions which take place between the nervous cells of cellular groups on the same side and of the same species, located close together or far apart; the first sort of connection exists in groups of sensory, motor, and ganglionic cells, wherever they present themselves only in groups; the second sort exists in the cerebellum and quadrigeminal bodies.

3. By the layer which I have denominated *couche en baguettes*, which is found at the periphery of the cerebrum and cerebellum, in which several nervous elements combine (sensory, motor, and ganglionic cells, with their ramifications), as I believe I have ascertained.

XIII. The visible and mensurable, relative and absolute relations of size and extent, as well as of weight, of the nervous mass in general, as well as of the insulated portions of the nervous system, do not indicate the importance of the whole or of parts of this system, neither in the lower animals nor in man. The absolute and relative size of the three essential nervous elements constitutes the criterion of this importance. Of all genera and species of animals, it is in man that they are relatively and absolutely the smallest; this is why that, on account of the space they occupy, they are more numerous in man. As, according to all appearances, the nervous cells are susceptible of multiplication, as all histological elements, it seems probable to me, that a numerical augmentation of the nervous elements coincides with a diminution of a part of the conjunctive tissue, during intellectual development, without any general increase in the bulk of the brain. Pathology has adequately proved that, in the opposite condition, in dementia and the different forms of cretinism, the development of the nervous ele-



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ments remains stationary, or that there is even a substitution of conjunctive tissue for nervous cells.

XIV. The different colors or shades that are met with in the nervous system, which have been regarded as characteristic of the anatomical constitution of certain regions, the gray, brown, reddish, violet, yellowish, and blue hues of nervous matter, have no relation with the condition of the nervous cells or their axis-cylinders, but depend solely on the blood vessels, their number, thickness, or delicacy, and other peculiarities of the same class.

XV. As to what relates to the origin of nerves arising from the cerebrum and cerebellum, I maintain the opinion already announced in my work, that all the nerves are, from their origin, of a mixed nature. Numerous and recent researches have strengthened me in this conviction. I limit myself here to the following results of my investigations:

1. The anterior and motor roots consist of filaments arising from motor, ganglionic, and sensory cells. The number of filaments arising from the ganglionic and sensory cells varies in the different regions of the cord.

2. The posterior roots consist principally of filaments arising from ganglionic and sensory cells, and of filaments, in fewer number, from motor cells.

3. The nerves of the medulla oblongata consist specially of filaments arising from ganglionic cells and of filaments arising from cells of sensibility. A few, a very few, (those which take their origin where the medulla spinalis passes into the medulla oblongata,) contain also filaments from motor cells.

4. All the cerebral nerves, except the nerves of the three principal senses, which consist solely of filaments from sensory and ganglionic cells, are formed of filaments from motor, sensory, and ganglionic nerves of the second species.

XVI. I should add an observation that has frequently recurred in the course of my investigations. I have often endeavored to kill suddenly by narcotics (prussic acid, nicotine, coneine, &c.) animals destined for my preparations. In every case, the preparations of the brain and spinal marrow became altogether useless for histological research, the nervous and cellular elements being destroyed completely, the membranes torn, the axis-cylinders separated from the cells and disintegrated, and the contents of the cells shrunken and deformed. I cannot refrain from attributing these remarkable changes, in every case, to the sudden interruption of nutrition produced by the action of the poison. These observations give the only tangible explanation of the sud-

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den and mortal action of the narcotics in general, and the alcaloids in particular.

All these facts, all these results of experiments, are based on a multitude of microscopic sections which I have made systematically, from the terminal loops to the external periphery of the hemispheres, in different directions, and in different animals. They are based especially on 25,000 such sections which are now in a good state of preservation, susceptible of transportation, and which leave nothing to be desired as regards their clearness and precision.

XVII. These observations demonstrate that the different thickness of the medulla spinalis and its two bulbs, and the increased bulk of the medulla oblongata, depend upon the difference in number and particular and local arrangement of the nervous elements.

## 2. *On the Structure of the Nervous Centres.* By Professor Lenhossek.

The following is a literal translation of an abstract of the paper furnished to the Académie des Sciences by M. Lenhossek, giving an account of his collection of anatomical preparations, made after the method of Mr. Lockhart Clarke, F. R. S. and with which, we understand, he has just arrived in London:

"It results from my researches:

1. That the central nervous system is composed of gray substance, of white substance, and of an intermediate substance, termed the gelatinous substance of Rolando.

2. That the gray substance is formed of a general hyaline mass, having three kinds of nerve-cells: (*a*) Nerve-cells with all their attributes, generally diffused. (*b*) Large nerve-cells with all their attributes, united into groups. These are seen in the motor columns, in the sensitive columns, and elsewhere. (*c*) Capherical-nerve cells with all their attributes, filled with a deep brown pigment. These form only the ferruginous substance, and the black substance of Soemmering.

3. That the white substance is formed of primary fibres, which terminate in the form of radiations in the different organs of the central nervous system.

4. That the so-called gelatinous substance is formed by the gray substance, which traverses, in the form of net work, the bundles of the white substance.

5. That the gray substance has the following relations: (*a*) In the spinal marrow it constitutes four columns, two

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anterior motor and two posterior sensitive, united together by the gray commissure. (*b*) In the medulla oblongata these four columns change their relative position, the anterior columns becoming internal, and the posterior external. They preserve this juxtaposition throughout the extent of the rhomboidal sinus. Farther on, the motor columns are continued alone to the bottom of the third ventricle, terminating in the infundibulum. The sensitive columns pass into the optic thalami and the corpora striata. (*c*) At the point where the juxtaposition of the four columns takes place, there the commissure disappears, and the median cloison of Vicq d'Azyr commences, this being formed by a prolongation of the gray substance. This cloison is continued through the entire length of the pons varolii.

6. That in the spinal marrow the white substance of the one side is completely separated from that of the opposite side by the anterior and posterior longitudinal groove; and in the medulla oblongata and pons varolii an analogous separation is produced by the cloison of Vicq d'Azyr.

7. That at the point where the juxtaposition of the four columns of the gray substance takes place, the white substance proceeds more and more forwards until the gray substance at last remains exposed in the rhomboidal sinus.

8. That the primary fibres of the roots of all the nerves arise in the gray substance: (*a*) In some cases these fibres proceed from prolongations of the nerve-cells. (*b*) But, most commonly, they arise in groups, without its being possible to determine their origin. These fibrous groups traverse the white substance in different directions, in order to form the roots of the nerves at the surface. They never contribute to the development of the white substance, nor does the latter furnish any fibres for the roots of the spinal nerves.

9. That the motor roots of the spinal nerves, and of the motor cerebral nerves, such as the hypoglossal, the external and internal motors of the eye, the facial, the small portion of the trigeminus, and the common ocular motor, take their origin only in the motor columns.

10. That the sensitive roots of the spinal nerves, and of the sensitive cerebral nerves—as the auditory, the large portion of the trigeminus, the optic, and olfactory—proceed only from the sensitive columns.

11. That the roots of the mixed cerebral nerves, as the two superior roots of the accessory nerves of Willis, and the pneumo-gastric, arise in both the motor and sensitive columns.

12. That there are four kinds of crossings in the spinal marrow, medulla oblongata, and pons varolii: (*a*) In the

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spinal marrow, the primary fibres of the motor roots cross in front of the central canal, and the fibres of the sensitive roots cross behind it. These intra-crossings are produced by a portion of the primary fibres of the roots taking their origin in the opposite side. (*b*) In the medulla oblongata and pons varolii, the primary fibres of the roots of the cerebral motor nerves, and only the motor portion of the mixed cerebral nerves, intercross at the middle of the motor columns, for the same reason as in the spinal marrow. (*c*) In the cloison of Vicq d'Azyr there is an intercrossing from right to left of some of the fibres of the white substance of the medulla oblongata, and of the pons varolii. (*d*) There is a crossing of the six walls of the bundles of the white substance, and of the medulla oblongata, in front of the central canal, known under the name of the pyramidal decussation.

13. That the primary fibres of the roots of the nervous plexuses of the pia mater, as also those of all the roots of the accessory nerves of Willis (except the two superior roots), proceed from all the periphery of the gray substance. In the plexuses at the surface of the pia mater are found: (*a*) Nerve-cells interposed between the primary nervous fibres. (*b*) Nerve-cells in groups, suspended and floating at the external surface of the nerves of the pia mater. These latter are filled with pigment.

14. That the two olivary bodies are composed of two substances, an external, gray, having convolutions, and an internal, white. The white substance is formed by the irradiation of the primary fibres of the peduncles of these bodies, which take their origin in the motor columns, and by the transverse commissure which traverses the cloison of Vicq d'Azyr.

15. That the central canal of the spinal marrow runs along its entire length, and opens into the calamus scriptorius. The walls are formed internally by a covering of cylindrical epithelial cells, and externally by a layer of the longitudinal fibres of Clarke, which extend into the epithelial layer of the rhomboidal sinus. In the lumbar region a granular mass is interposed between this fibrillary layer and the epithelial cells.

16. That on each side of the central canal there is a large vein, which successively bifurcates in the region of the medulla oblongata, and in that of the medullary cone."

*Moniteur des Hôp.*

[This paper was referred to the same commission that is charged to report upon Professor Jacubowitsch's Memoir in the Histology of the Nervous System, an analysis of which appears in this number of the Journal.]

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## MEDICAL PATHOLOGY AND THERAPEUTICS.

1. *Treatment of Epilepsy.* By E. Brown Sequard.*

Proposing to develop fully this subject elsewhere, we will merely lay down here a few propositions:

1. The first thing to be done in a case of epilepsy is to find out if its origin is peripheric. The state of all the organs must be enquired into as completely as possible. For some of the means to be employed to detect the peripheric origin of fits of epilepsy, we will refer to § XI.

2. If it be ascertained that epilepsy is of peripheric origin, employ proper means to separate the nervous centres from this origin, or to remove the cause of the excitation entirely. Leaving aside what relates to the viscera, the application of ligatures, as we have shown in § IX, ought to be tried first. Sometimes it happens, as in a very curious case recorded by Recamier, that the aura will disappear from a place, and reappear in another; it will be well to pursue it thither, and apply ligatures in the new place.

3. If ligatures fail, this is no reason for despairing of other means having the same object. The nerve animating either the part of the skin from which originates the aura, or the muscle or muscles which are the first convulsed, must be laid bare, and sulphuric ether thrown upon it. This might, perhaps, be sufficient to cure the affection; if it is not, then the nerve must be divided.

4. The amputation of a limb for epilepsy is a barbarous act, the section of the nerves being all that is necessary.

5. Sometimes blisters, setons, caustics, etc. in the neighborhood of a part which is the origin of an aura, may be sufficient to cure, but these means have not the same efficacy as the application of a red hot iron.

6. The best means of treating epilepsy seem to consist in the application of a series of moxas along the spine, and particularly the nape of the neck.

7. The nutrition of the nervous centres may be modified, and thereby epilepsy be cured, principally by the medicines which act on the blood vessels, such as strychnia, but particularly by those which determine contractions in these vessels, such as atropia, ergot of rye, etc.

8. Trepanning, in cases where a blow on the head or some

* Experimental and clinical researches applied to physiology and pathology.

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other circumstance seems to indicate it, ought not to be resorted to until cauterization and other means of producing a modification of the conditions of the skin of the head have failed. See § IX.

9. Cauterization of the mucous membrane of the larynx, which has been successful in some cases in which there was considerable laryngismus, is an excellent means, not only of diminishing or preventing the spasm of the larynx, but as a mode of producing a modification in the nutrition of the medulla oblongata.

10. As a means of treatment too much neglected, we will point out the possibility of the transformation of epilepsy into intermittent fever, which has been proved by the important facts observed by Dr. Selade, by Dumas, etc. The frequent passage of an intermittent fever into epilepsy, and the facts which show that the nerves of the blood vessels are excited in the nervous centres in fever and ague (the galvanization of the cervical sympathetic nerve produces the effects of this fever, viz: cold, soon followed by warmth and perspiration), show also that there are great analogies between epilepsy and intermittent fever. So it is as regards the efficacy of ligatures in both diseases. That intermittent fever is an affection of the nervous system is proved by a curious case of fracture of the spine, in which the parts paralyzed remained in their normal state, while the rest of the body had all the phenomena of a paroxysm of fever and ague. (Dr. Knapp, in N. Y. Jour. of Med. Sept. 1851, p. 199.) From these facts and many others, we think it would be of the utmost importance to try to have fever and ague generated in epileptics (see Dumas in Bibliotheque Medicale, vol. xxxi, and Delasiauve, loco cit. p. 378 and p. 419), as a means of cure of epilepsy.

11. We will merely add, that hygienic means are as important as the treatment, and that sleeplessness ought to be as much combatted as the disease itself.

## 2. *On the Use of Chloroform in certain Forms of Paralysis.* By M. Landry.

M. Landry terminates a long series of papers with the following conclusions:

1. There exists a group of paralyses of the motor powers, offering the following general characters: There is preservation of muscular irritability and of the excitability of the nervous trunks, integrity of muscular nutrition, and absence

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of reflex motion, of spontaneous convulsive movements, of contractions, of fibrillary contractions, and of trembling in parts actually deprived of voluntary motion.

2. In this group may especially be ranged hysterical paralysis and sympathetic paralysis, generally confounded together under the common denomination hysterical.

3. Some of these paralyses disappear during sleep, and immediately yield to the action of chloroform (probably also of ether) and narcotics. Others undergo no modification under such influences.

4. The former appear to belong to the category of sympathetic paralyses; the latter to that of hysterical paralysis, properly so called.

5. These phenomena constitute a means of diagnoses of true hysterical paralysis.

6. They serve to distinguish in all cases the paralyses in which they are observed from those which are dependent upon organic, nervous, or muscular lesion.

7. Narcotic and anæsthetic agents may be employed in the treatment of paralysis, whether as curative agents, palliatives, or simple auxiliaries. *Moniteur des Hôp.*

### 3. *Chloroform in Intermittent Fever.*

M. Delioux, a professor in the French naval medical school, has long been engaged in searching for succedanea for quinine. Having observed that when he administered chloroform to phthisical patients, that it not only relieved the pain in the chest and cough, but also moderated the fever and nocturnal sweats, he conceived it might possess febrifuge powers also; and the result of numerous trials is the ample verification of his supposition. He forms a syrup, by adding five parts of chloroform to 100 of simple syrup, of which he gives from ʒj to ʒiij in a mixture, at the same intervals at which quinine would be given.—*Union Méd.*

### 4. *New Remedy in Hemicrania.*

Dr. Jung stated at the Berlin society of medicine, that in the neuralgic pains known by the term migraine, or hemicrania, and especially when the infraorbital nerve is affected, he has found the aspiration of the following mixture an almost infallible remedy. Dissolve 4 grains of acetate of morphia in a few drops of acetic acid, and add ʒ1½ of laurel

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water and 10 drops of prussic acid. Of this mixture, 10 drops (or in very excitable persons 5) are to be mixed with an equal quantity of water, and strongly aspired by the nostril corresponding to the side of the pain, keeping the other closed. The relief is immediate; but the existence of a coryza is a contraindication to the employment of the remedy.—*Bull. de Thérap.*

5. *Acute Articular Rheumatism.*

Dr. Hauschka recommends, as the best means of abbreviating the duration of acute articular rheumatism, the administration of large doses of iodide of potassium in conjunction with morphia. He gives in the course of the day from 15 grains to 4 scruples of the iodide, with from ½ to 1 grain of morphia. He never has recourse to local treatment when the rheumatism is polyarticular.—*Rev. Méd.*

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## OBSTETRICS, &c.

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1. *The Use of Compressed Sponge in Abscess of the Breast.* By S. Conant Foster, M. D. (N. Y. Jour.)

In a paper on the use of the sponge in abscess of the breast, Dr. Foster thus remarks:

"The secret of the efficacy of the sponge consists, it seems to me, in three things:

1. They enable us to apply uniform, and, at the same time, gentle pressure.
2. They have all the emollient effect of a poultice.
3. They absorb the matter or milk discharged, and promote its flow by capillary attraction. The following is his modus operandi. The softest pieces of sponge should be selected, each piece being large enough to cover the entire breast. The sponge should be carefully washed, to remove any gravel, shells, &c. it may contain; and when it is thoroughly dried, it is to be compressed for a long time under a heavy weight, or between the lips of an ordinary carpenter's vice. The sponge, when thoroughly pressed, should be bound as firmly to the breast as the patient will allow,



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by means of a bandage passing several times around the body, above and below the other breast, a piece of lint being placed between the breast and the sponge, to prevent the latter from irritating. It is then soaked with cold water, and the bandage preventing the sponge from expanding outward, its expansion makes the desired pressure upon the breast. The patient usually complains of pain for ten or fifteen minutes after the first application. (This pain is attributed, in another part of Dr. Foster's paper, to the use of cold instead of tepid water, though cold water is here recommended.) The temperature of the water dressing is soon raised to that of the body, and thus we have the essential elements of a poultice—heat and moisture—without the inconvenience of an ordinary poultice. This soft, yet firm compression adapts itself evenly and equally to the whole breast, and the sponge not only forces out the matter, but absorbs it. The sponges are to be kept wet during the whole time of their application. The patient soon becomes accustomed to them, and the alleviation of the suffering is so great, as to cause her to request the continuation of the treatment. The sponges should be renewed daily."

Fourteen cases of successful treatment of mammary abscess, occurring in Bellevue hospital, are reported.

2. *Retarded Deliveries.* By Robt. Annan. (Ed. Med. Jour.)

Mr. Annan's cases of retarded delivery serve to illustrate the vexed question of the duration of gestation. A woman after passing the danger of premature labor, suffered shipwreck, went through excessive physical exertion, and exposure, and mental anxiety, in attempting to save a child; she nevertheless had no pains, and was delivered 332 days after the cessation of the last menstruation. Mr. A. next relates two cases of retarded delivery following psychical exaltation. In one, a woman aged thirty-four, mother of several children, expected, according to her reckoning, labor on the 5th June 1851; at the end of the seventh month, having attended the exhibition of a mesmerist, she returned home so unwell and excited that she had to seek medical advice, especially dreading premature labor. There were no pains, and in a few days she had recovered. The period of her delivery passed over, and on the 20th July, quite six weeks later, she was delivered of a child weighing ten pounds four ounces, by the forceps. The size of the placenta corresponded to that of the child. Her former chil-

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dren had not much exceeded seven pounds in weight. In the second case, a woman aged forty-four was delivered in the beginning of October 1840, whilst she had had her last menstrual period at the end of December. Shortly before she had heard of the severe labor of an acquaintance, and had been much excited in consequence. Here also uterine contractions first appeared long after the calculated time, namely, on the 20th November; and the woman was delivered on the following day of a dead child, with the forceps. It weighed nine pounds eight ounces. Another case is related, in which no obvious cause of retardation was present. A woman, aged twenty-six, who had aborted three times, which was also threatened in her last pregnancy, was delivered of a child weighing ten pounds eleven ounces, on the 15th February 1857. Her last period was observed on the 1st April 1856, so that about 327 days had expired. [The reporter has also observed cases where excessive weight of the child corresponded with apparent protraction of gestation.]

3. *Case of Unconscious Delivery.* By Dr. Smith. (Indian Annals.)

Dr. Smith's case of unconscious delivery is interesting both in a physiological and medico-legal point of view.

Mrs. S*** was daily expecting her confinement. On the 24th April 1856, I was sent for suddenly, and on reaching the house, found the child born, and lying under the bed clothes, close to the body of its mother. The cord was entire, and the placenta within the vagina. The delivery had taken place suddenly. During the night preceding her delivery, this lady had felt quite well. She rose several times to attend to her sick child. About half-past five A. M. she walked from her house to the bungalow in which she was confined. When she reached the bungalow, she lay down upon the cot, and experienced a very slight sensation, as if her bowels were about to be relieved—a feeling as if something had touched her body followed, and caused her to ask the ayah to lift the bed clothes when, to the surprise and alarm of both, the child was found entirely extruded. Mrs. S. was awake, yet so little was her notice attracted by her feelings, that the delivery took place unconsciously. This was her second child. The first was born with the usual pains, after a labour extending over six hours. The child, a female, was a little undersized, but not much.

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4. *Successful Cæsarian Operation.*

At the meeting of the Academy of Medicine of Paris of August 25th, 1857, M. Depaul reported a Cæsarian operation, performed at the Maternity of Tulle, by Dr. Pauquinot, by which the lives of both mother and child were preserved. The operator attributed his success to the robust constitution of the woman, the excellent hygienic condition of the hospital, the use of chloroform, and the early period at which the operation was performed.

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## SYPHILOGRAPHY.

1. *Results of the treatment of two hundred cases of Constitutional Syphilis, by Syphilization.* By Professor Boeck, of the University of Christiana.

The Editor of the Medical Times and Gazette.—Sir—In your Journal of September 5 you have made some editorial remarks on syphilization,* and as your only wish is to place the matter in a true light, perhaps you will kindly permit me, though a foreigner and a casual visitor here, to make a brief reply.

You speak of the subject from theory only. I can speak of it on the far surer ground of practice; for I have now treated upwards of 200 cases of constitutional syphilis, that is, of the secondary and tertiary forms of the disease, by syphilization alone; and with far greater success and certainty than belongs to any other form or forms of medication that I am acquainted with in this malady. Several of these 200 patients had been afflicted with syphilis, and with bad forms of it for years. This mode of cure has succeeded perfectly in every case, with the exception of a few in which mercury had been taken previously, and where the nodes or caries already present have so far necessarily left deformities.

I have, indeed, the most sincere conviction and proof:

1. That there is no fact more certain in medical and surgical therapeutics than the fact of the curability of constitutional syphilis by syphilization.

* Va. Med. Journal, vol. ix, No. v.

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2. That this method of curing constitutional syphilis is infinitely more certain than the methods of cure by mercury, iodine, hunger cure, or any other means yet proposed.

3. That it is free from the dangers attending the mercurial treatment; and

4. That relapses are more rare after this than after any other known method of treating secondary or tertiary syphilis.

For the last five years I have been using syphilization in my practice. I have watched it and its results with the greatest possible care, and am thus entitled to express an earnest opinion regarding it. But you may ask me, and with justice, what induced me at first to commence the practice of syphilization. To this I would reply, that when we have against any disease a good and certain remedy we should be very cautious in trying a new one. Were something new proposed, *e. g.* for intermittent fevers, we should not be very zealous in adopting it; for in quinine we have a safe and sufficient remedy; and were any one to propose a new and apparently more dangerous one, we should, perhaps, be justified in hesitating and holding back. Now the question is, have we any such certain remedy for syphilis? In my opinion we have not. I have gone over the journals of the hospital in Christiana for the last thirty years, and I find that of the cases of constitutional syphilis treated with mercury, 27 per cent. have returned to the said hospital with a relapse of the disease. If you consider that many relapsed cases have been treated elsewhere, you will see that the proportion of relapses is very great; and yet the mercurial treatment was in all these cases cautiously yet fully carried out. I believe the results in other hospitals are not very different. But not only have we frequent relapses after mercury; we have also dangerous sequelæ, the connection of which with the remedy employed cannot be questioned, particularly diseased bones, paralysis, etc.

These considerations prompted me to try a new remedy, which seemed to me at first thought just as incomprehensible and repulsive as at this moment it appears to you. What was known of syphilization in 1852 seemed to me, however, to prove, beyond a doubt, that we had to do with something hitherto quite unknown, as well in a physiological as in a pathological and therapeutic point of view. At that time the published experiments of Sperino on man, and of Auzias Turenne on animals, were so striking as evidently to deserve the attention of medical men in a theoretical or physiological point of view, even though the practical consequences

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anticipated from them had never come subsequently to be realized. But the practical consequences are now far more interesting and more important than the physiological questions connected with syphilization.

You have yourself explained how the syphilization is effected; and here I would only remark, that those numerous insulated pustules or chancres of which you have spoken are not in practice so formidable as might be expected, for it is only the first twenty or thirty that come to any size; afterwards they always become less and less as the case and the cure proceeds, until they finally disappear, the syphilitic matter first inoculated having no longer any effect whatever.

I regard this as a new fact, and we dare not reject it merely because we cannot explain it. But here we have several further new facts. If we now take some fresh primary virus from any other patient, we can produce a new series of inoculations, but this second series is not at all so great or severe as the first; and we hence clearly recognize that a salutary change has occurred in the organism of the patient. We can take still a third quantity of new virus from a primary chancre in another patient, and with this produce some few chancres; and perhaps even with a fourth or fifth we may excite a couple of small insignificant pustules.

Had we formerly any idea of these phenomena? Of immunity by such means from the syphilitic poison no one had previously any conception. But, of course, there are some who believe that it affords no immunity. I shall therefore make a few observations on this point.

I have told you that the series of inoculation pustules that can be made with every new quantity of matter become always smaller and smaller as the syphilization proceeds; and that at last, as the cure is completed, no further series, or no further pustules, can be produced. I have explained to you, further, that the earlier chancres are very large, the later very small and abortive, so to speak. I am, therefore, convinced that the few small pustules which we produce with a fresh virus, and which lead to no characteristic ulcers, cannot be regarded as proofs of the cure not being completed. I will not engage in any strife as to the word "immunity;" I would only insist on this, that the body is brought into a new and healthier condition by these inoculations.

I come to the indications for the employment of these inoculations. You have spoken of syphilization as a prophylactic means; and, in truth, this idea was expressed by

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Auzias Turenne, when he first discovered the immunity in animals; but it has never been carried out in practice with this view. The only question is, in what cases of syphilis may it be employed? With you I perfectly agree in thinking that such a use of syphilization as that to which I have just alluded is unjustifiable. Further, I never employed, and should never employ, syphilization against primary syphilis; for no one knows with perfect certainty whether the patient who has a primary sore will or will not become affected with constitutional syphilis; and I have assuredly no authority to introduce into the organism of a patient a poison which is not already there. I should, therefore, only use syphilization against constitutional syphilis; for here the whole organism is already pervaded with the syphilitic poison, and here I therefore introduce nothing new into the system. Of late years Sperino has employed syphilization only as a remedy for constitutional syphilis, as I had always done.

What have been the results of the inoculations? In answering this question, we must distinguish between the cases where mercury had not previously been used, and those which had undergone one or other of the forms of mercurial treatment. Those under my care who had used no mercury were all, without a single exception, cured by syphilization. All that I have found necessary was, to inoculate the trunk or limbs every three days, regardless of any new symptoms that developed themselves. Even iritis I have come to regard without apprehension; for, like other intercurrent symptoms, it spontaneously disappears during the syphilization, without requiring any special treatment.

When mercury has been used, we have to do with quite another matter: then every thing does not go on so regularly; then we may have relapses; in short, we must not judge of the effects of syphilization from such cases. You will ask, then, whether in such cases syphilization should not be employed? And I answer, Yes. In combination with iodine it will usually accomplish a cure; and, even in the worst and most doubtful cases, it will produce great and marked melioration.

As this treatment can be employed in adults, it can, in like manner, be applied to the youngest children; and it is worthy of remark, that immunity results in these small organisms from only little ulcers.

The physician might feel anxious as to the effects of syphilization on the body and system in general; but this anxiety is uncalled for, because the syphilizated enjoy good health. In my private practice, I let them pursue their usual avoca-

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tions; they eat and drink just what they please; and, if before being syphilizated, they were weak, they never fail to improve in health afterwards; so that, after the syphilization is finished, they are quite as strong and healthy as before being attacked with syphilis.

I have still to speak of the relapses. Of these I have had three individuals, who had not previously taken mercury. Great stress has been laid on these relapses; but, were I to enter into the subject at length, I could show that even relapses do not argue against syphilization; but at present I would rather have them looked upon as ordinary relapses, and observe, that it is a very unusual and a very favorable proportion to have, out of about 100 previously non-mercurialized patients, only three relapses. These three were all cured by a second syphilization; and I would merely add, that in this second syphilization they were susceptible of a much smaller number of inoculations than at first before immunity became established.

The number of relapses, among the 100 (or so) previously mercurialized patients, I cannot at this moment, and at this distance from home, venture to state, but unquestionably the relapses were far milder than the previous disease.

Since finding these beneficial results from syphilization, and such unfavorable ones from mercurial treatment, I have of late treated constitutional syphilis invariably by syphilization. If what I have communicated to you be true, then I think you will agree with me as to the great importance of syphilization. That you cannot comprehend, any more than I can, how repeated inoculations produce their effect, signifies nothing. As explorers of nature, we must first carefully observe nature; afterwards we may attempt to explain the observed phenomena. But in the mean time, as a practical man, I content myself with the great practical fact that, in syphilization we have the purest, simplest, and safest cure for constitutional syphilis which has yet been discovered.

I am, &c.

W. Boeck.

2. *On the Transmissibility of Syphilis by Vaccination.*

Some of our readers perhaps recollect the case of the German physician, Dr. Hubner, who was accused of producing syphilis in several infants by vaccinating with impure virus, and was condemned to imprisonment.*

* See Virginia Medical Journal, vol. vi, p. 519.

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Dr. Heymann has published an elaborate review of this trial (Behrend's Zeitsch. f. d. Staatsarsneikunde, Feb. 1856), and adduces some additional facts relating to the important question involved in it.

Dr. Shreier of Munich, vaccinated two children affected with constitutional syphilis, and obtained virus of excellent quality, which he inoculated on several healthy infants, who never manifested the slightest trace of infection.

At Java, and other localities in the Indian archipelago, vaccinations are performed by the natives. On market days, all the children under four months are collected together, and vaccinated from arm to arm. During a residence of 20 years in these regions, the author has often observed that the children furnishing the virus on these occasions were affected with chronic cutaneous diseases, sometimes of a venereal character, and was informed that no ill effect had been known to result from this source.

The author, from his own observations and those of others, arrives at the positive conviction that vaccine virus never serves as a vehicle for the transmission of any contagious disease.

3. *New Views on Chancres and Syphilis.* By P. Ricord.

These views have just been published in a work of a pupil of M. Ricord. (Leçons sur le Chancre, professées par M. le Dr. Ricord, publiées par M. A. Fournier.) The learned professor of syphilography still thinks that every syphilis begins by a chancre; but he has given up the doctrine he so long held, that there is but one kind of chancre. He now admits two very distinct chancrous ulcers, both innoculable, and essentially contagious: one of which is the soft, or local chancre, able to produce a suppurative bubo, but absolutely unable to generate constitutional syphilis; while the other, the indurated chancre, from which originates the painless and not suppurative bubo, is essentially the infecting chancre, which alone generates constitutional syphilis. The indurated or infecting chancre may exist every where, that is, on the whole surface of the body, including that of the head, while the soft chancre never exists on the head. Messrs. Puche and Cullerier, colleagues of M. Ricord at the syphilitic hospital of Paris, have also remarked that the soft chancre is never observed on the head.

M. Ricord thinks that each kind of chancre generates only



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its own kind when it passes from one person to another, except in a peculiar circumstance of which we will speak hereafter. He affirms that the induration of a chancre never appears before the third day, and never after the third week. If a chancre is to be indurated, it therefore acquires quickly this character; and it is wrong to consider induration as one of the modes of termination of a syphilitic ulcer. Some physicians have thought that phagædenism was a sign of immunity against constitutional syphilis. M. Ricord affirms that this is a very great error. According to him phagædenism is only an accident, a complication of chancres, and it may exist with one or the other of the two kinds of this ulcer. The cause of the mistake made concerning the immunity of phagædenic chancres is, that the soft chancres present this character much more often than the indurated ones. A mode of treatment of phagædenism has lately proved so successful in the syphilitic hospital that it may be considered as specific. It consists in dressing the ulcer with a solution of tartrate of iron and potash, while the patient takes iron.

M. Ricord still teaches that constitutional syphilis cannot be doubled, that is, that a man cannot have twice an indurated chancre, and that when once a constitutional syphilis exists another cannot be taken. If a man with constitutional syphilis be exposed to contagion of chancrous pus, or inoculated with it, almost always will there be chancre formed; or if there is one, in both these cases it always is, according to M. Ricord, a soft one, and the pathognomonic indolent bubo does not appear. Newly observed facts lead this physician to think that a soft chancre in a man attacked with constitutional syphilis may communicate an indurated chancre to another person, and he imagines that in this case the soft chancre had been given by pus from an indurated one.

A few years ago M. Bassereau tried to prove that the two kinds of chancres belong to two distinct kinds of syphilis. M. Ricord does not admit this opinion. He says that there are two essentially different types of chancres, and that one of them seems not to be syphilitic, and he maintains that there is only one kind of syphilis. He is inclined to admit the existence of two kinds of contagious virus, one of which is able to act on the whole body, and to generate constitutional syphilis, while the other is unable to produce general syphilis, and to act elsewhere than on a limited part of the body.—*Times & Gaz.*

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# EPIDEMIOLOGY.

## 1. *The Progress of the New Cholera Epidemic.*

That mysterious and fatal "scavenger of the nations," epidemic cholera, has undoubtedly, for the *fourth time*, commenced to march from its constant habitat, the Indian jungles, westward. Slowly it follows the same road already fearfully marked with the graves of its numerous victims, crossing the broad realms of Russia, and taking the route by the Baltic sea, until we are now justified in declaring, with great confidence, that it will eventually, after passing over the British isles, be again the unwelcome visitant of our own land. Having approached sufficiently near the western countries of Europe to enable the journals of Great Britain and France to obtain reliable statistics, we have selected from these periodicals several items of interest to our readers.

From the 20th September to the 11th October, 208 cases have occurred at Dantzic, of which 109 have proved fatal. A third part of the cases with only a twelfth of the mortality occurred among the military. The entire number of persons who have fallen a sacrifice to cholera in the province of Dantzic, during the seven years in which it assumed an epidemic form, (1831, 7, 1848-9, 1852-3, and 5,) amounted to 73,000; no other province of the Prussian monarchy having suffered to the same extent. In the district of Königsberg 988 cases have occurred to the end of September, of which number 526 died, 320 recovered, and 283 remained under treatment. At Stockholm to the 9th of October, 818 cases have occurred, with 392 deaths.

Our English contemporaries announced to the public, early in October, their fears of the approaching pestilence, and earnestly appealed to their government and the profession to prepare for that event. Cholera having become epidemic in Hamburg about the 1st of September, it was at once remembered that, judging by past experience, its next leap would land it on the English shores; and on this point the editor of the Medical Times and Gazette uses the following prophetic language:

If past experience is to be trusted as a lesson for the future, we cannot fail to learn that we are threatened with another invasion of cholera, and that it will arrive, as it did on both its former attacks, from Hamburg. Between the 29th of August and the 6th of September there were 239 cases, of which 136 proved fatal, in that city. We have not

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received later accounts of the exact number of cases and deaths, but we have been informed that the mortality has been very large. Dr. Webster, in his late northern tour, followed in the track of the pestilence from Königsberg westward. He describes the severity of the epidemic as extreme. At Upsala the university had been closed, and many of the inhabitants had fled. The board of health, then, is certainly not premature in issuing a circular of precautionary advice to local boards of health. Cleanliness, ventilation, pure water, are the great objects—the public health act, the nuisances removal act, and the common lodging house act, the means of effecting them. We trust that all will join cordially in assisting the local boards to exercise their powers to the fullest extent, in the hope of meeting the common danger; and, as an additional precautionary measure, we trust that the most stringent instructions will be given to our custom house authorities to prevent a direct importation of the disease. We are perfectly aware of all the arguments against quarantine and the contagiousness of cholera; but we still think that it would be a most culpable piece of neglect and infatuation to admit cholera patients arriving from Hamburg or elsewhere to unrestricted intercourse with the inhabitants of any of our ports.

At this time also the general board of health took the alarm, and addressed the following precautionary advice to the local boards throughout the country. We quote extracts from their circular, as they contain valuable advice—the result of the observation and experience of the past:

"Gen. Board Health, *Whitehall*, Sept. 29.

Cholera has again become epidemic in several of the Baltic ports, and at Hamburg. On each of the three former occasions, when the disease has visited England, its first appearance in our eastern seaports followed closely on its epidemic outbreak in the last named city. During the past three months there has been observed in London, and in some other parts of England, a very unusual fatality from diarrhœa; and this derangement of the public health is such as, on the previous occasions referred to, preceded the commencement of the epidemic periods of cholera. The general board of health deems it expedient to call the attention of local boards of health to these facts, and most earnestly recommends that the powers vested in such boards for the protection of the public health, be exercised from the present time with especial vigilance. As regards the exercise of these powers with particular reference to the prevention of cholera, the most important security for the public health is to be found in the fulfillment of two conditions: First. That the air within and about dwelling places be not contaminated with offensive organic effluvia, such as arise when the houses themselves are ill ventilated, overcrowded, and unclean, or when their refuse is not properly removed from them by drainage or otherwise, or when any filthy accumulations exist in their neighborhood, or when the local sewerage is defective. Secondly. That the public supply of water be, as far as possible, unpolluted by any kind of animal or vegetable impurity; for where cholera is present or impending, no house can be considered safe for habitation in which there is any offensive smell of animal refuse, or of other putrefactive animal or vegetable matter; and no water can be considered safe for drinking into which there flows (as is often the case with rivers and with wells in the neighborhood of houses) any habitual discharge of town refuse, or any accidental soakage or leakage from drains or cesspools.

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The general board of health would earnestly direct the attention of local boards to these cases. They (with many similar facts) support the conclusion which, at the close of the last epidemic, was adopted by the medical council of the general board, to express the present state of scientific knowledge as to the causes of cholera: 'The doctrine of epidemic cholera, which has gained almost universal acceptance, does not affect to explain what may be that power—the exciting cause of the epidemic manifestation, which at intervals of time has forayed from place to place about our globe, sometimes vaguely spreading over a widened area, sometimes seeming to move in more defined procession, and which now for the third time has shed its fatal influence on our land. But, with this mystery still unsolved, there has grown more and more into shape a doctrine which is both intelligible and practical—that the undiscovered power, in its wanderings, acts after the manner of a ferment; that it therefore takes effect only amid congenial circumstances, and that the stuff out of which it brews poison must be air or water abounding with organic impurity.' It is possible that no human efforts may suffice to avert the course of that epidemic ferment which thus, at certain intervals of time, comes, as it were, to test the sufficiency of our sanitary defences. But public authorities, armed with the existing powers of the law, can do almost every thing to render the mysterious influence innocuous by removing those local conditions through which alone it is enabled to destroy life in this climate."

This earnest and prompt action by the leading journals and medical authorities of England, was not the result of causeless fear, but the wise instincts of accurate observers. On the 8th of October a case of genuine cholera occurred in Westham parish, which is on the river Lea, about two miles from the Thames, and on the direct road between Horseydown, a port having a large cattle trade with Hamburg, and London. Twelve cases appeared, and the Medical Times and Gazette announces the intelligence in these words:

Cholera, in a virulent form, is among us again. We have been informed by Dr. Elliot, of Stratford-green, that he has had twelve cases, of whom six have died, in a row of small houses in Westham parish, about a hundred yards from the river Lea and two miles from the banks of the Thames. The first case occurred on the 8th instant, and was fatal in ten hours. All the other cases occurred in the same row of houses, and there has been no other case in the parish, which contains 30,000 inhabitants. Dr. Elliot has made most searching enquiries as to the origin of the disease, but has not been able to arrive at any satisfactory conclusion. The district lies low, and bad smells have been complained of lately after the opening of certain sluices. Some cattle from Hamburg have been kept in a field near the houses where the first cases have occurred; but Dr. Elliot has not been able to trace any connection between this fact and the commencement of the epidemic. We are informed that there was no premonitory diarrhœa in any of the cases, the suddenness of the attack adding to the difficulty of combatting it, the patients falling into collapse almost without warning. It will be necessary to institute the most searching enquiry, in order to discover if possible if the disease has originated here, or has been introduced from abroad.

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The same valuable journal, which we regard as one of the most useful and reliable of our English cotemporaries, in their issue of the following week, proceeds to give additional particulars:

We have repeatedly insisted on the necessity of guarding against the importation of cholera from Hamburg, and of establishing something like a quarantine of observation upon vessels arriving in this country from infected ports, so that at least no case of actual cholera should be admitted to unrestricted communication with our population. The usual cry of difficulty and impediments to commerce is raised by those who know nothing of the subject of quarantine. No precautions of the kind are taken, and the cholera is imported, just as it has been imported before. The following case, from the weekly returns of the registrar-general, is a case in point:

"At Horselydown, on board the Lütcken, on the 22d of September, a seaman, aged 27 years, 'cholera Asiatica (19 hours).' Mr. Platt, the registrar, says, 'The ship Lütcken arrived at Horselydown, St. John's, on the afternoon of the 21st instant, from Harburg (Hanover). She had touched at Gluckstadt, and stopped there twenty hours, at which place cholera raged lately, and carried off 5 per cent. of the inhabitants. Deceased had not been ashore at Horselydown.'"

Mr. Beale, the registrar of Westham, states, "The cattle from Hamburg pass in great numbers along Abbey-row in their way to the Marsh, immediately on their arrival from the Eastern counties railway; and complaints are made of the odor arising from the cattle in passing." The registrar-general says:

"An immense commerce is carried on between England and Hamburg, on the Elbe, in vessels which are in a very unsatisfactory sanitary condition, the berths of the steamers conveying passengers being at times saturated by the steam of water closets. The condition of the ordinary vessels may be easily imagined. To avoid the delays of quarantine all steamers should undergo sanitary inspection, and the sailing vessels in the river should be thoroughly cleansed. They should get pure water, and they would not then form a bridge over which epidemics can march from Hamburg to London."

We would insist as strongly as any one on the importance of cleansing vessels, but the system of sanitary inspection which could enforce effectual cleansing would be very extensive indeed, and require a long time for organization. In the mean time cholera patients may come over, and quite enough evidence has been collected to show that this is a danger which ought to be guarded against as far as possible. We believe, therefore, that a short quarantine of observation upon all vessels arriving from Hamburg and other infected ports should be enforced immediately. It might cause some temporary inconvenience and commercial loss, and after all be unsuccessful. It is late to take the precaution now that the disease is here, but the outbreak may, possibly, be circumscribed; and it is better to err by excess of precaution, than by obstinate and willful neglect of one source of danger.

We will close our resume of this subject at present, by publishing a condensed account of the observations which have been made as to the cause of the outbreak and the character of the epidemic. We would advise the American profession to be on the alert, and to endeavor, by rousing the

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attention of the municipal authorities throughout the country, at this early day, to the vital importance of preparing for the storm, by all the precautions which a knowledge of the facts may furnish.

No sooner had an intimation of the return of cholera here appeared last week than two of our correspondents were on the spot investigating the origin of the disease, and the duration of the premonitory diarrhœa. The results of these investigations will be found in other columns of this number. Dr. Snow's researches show the extreme importance of guarding most carefully against the impregnation with fæcal matter of water used for drinking. There are very many pump wells in which the water is poisoned by percolation from adjoining privies. Those who differ most widely from Dr. Snow in his views as to the transmission of the cholera poison, must admit most fully the great services he has rendered by proving the close relations between the extension of the disease and the use of impure water. Dr. Macloughlin's belief in the invariable occurrence of premonitory diarrhœa before cholera sets in, appears to be strengthened by the cases at Westham, though the period between the first liquid evacuation and the commencement of cramps and vomiting, was in some of them very short. The question naturally arises—Is this diarrhœa of an hour or two premonitory diarrhœa, or the first stage of cholera? But this question sinks into insignificance before the more important enquiry, if there be invariably a period between the first liquid evacuation and the occurrence of cramps and vomiting in which medical treatment can cut short the disease. This is the really important point to which Dr. Macloughlin's laborious enquiries tend; and no one will deny him credit for the industry and perseverance with which he has followed up the investigation.

## 2. *Yellow Fever in Lisbon.*

While we record the progress of cholera in the north of Europe, we regard it as equally our duty to notice a fearful epidemic of yellow fever in the capital of Portugal. The French government, with commendable propriety, has sent a medical commission to report on the disease. The following extract from the Medical Gazette of Lisbon leaves no doubt as to its character.

We have stated that the French government has sent a medical commission to Lisbon, to report on the epidemic fever which has been so fatal there. It is much to be desired that our own government would follow so good an example. Possibly, the corresponding members of the Epidemiological society might throw some light on the subject. In the mean time the following account of the symptoms of the disease, from the Medical Gazette of Lisbon, leaves little doubt that it is true yellow fever.

The remissions, the jaundice, and the hemorrhages, are all constantly observed in this disease: "The symptoms of the disease are those which authors have described. The intermittent fever is rare, and even the remittent is not common. Hemorrhages in the skin and mucous membranes are very common, the yellow color very general, and very marked

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in bad cases. One important fact has been observed, and of which practitioners require to be well informed, not because they misunderstand it, or that authors have not pointed it out, but because it occurs in this epidemic with a deplorable frequency. In the transition from the first to the second degree, one sees patients who appear to be doing well—showing no distressing symptoms—who have not neglected the prescribed regimen, and have not aggravated their condition by any known cause; yet the pulse becomes lower, their strength fails, the head is confused, hemorrhages appear, the adynamic condition declares itself rapidly, and death supervenes in a few hours, notwithstanding all the efforts of an energetic and prompt treatment. This rapid modification of the disease took place even with patients who appeared well in every respect, and who were put, by precaution, on quinine, wine, and other tonics and diffusible stimulants. It happened with convalescents who ate, who got up, and expected to be soon well. It would sometimes appear that the patient had experienced a second attack of the scourge. Some suffer hemorrhages, others anxiety; others went into a comatose condition; almost all had hiccough, nausea and delirium."—*Med. Times and Gazette.*

A correspondent of the London Times gives a graphic sketch of the consternation prevailing in the city, reminding us of those sad scenes which have occurred so near home. He says:

Little or no amelioration can yet be noted in the course of the fever. Business continues almost paralyzed, and the transactions in the shops as well as in the counting houses of the merchants, are almost a nullity. The lower part of the town, which is decidedly the business quarter, is almost deserted, and very many of the shops are closed. Every second person you meet converses about death, cases, symptoms, or remedies. If this state of things continue, there may be a probability of a crisis in the commercial community.

*A strong belief exists that this fever was imported in the Tamar, which arrived here from Brazil on the 2d ult. after an unprecedentedly short passage. Certain it is, some very dirty baggage brought by her was opened at the custom house, and all the employés who were present have since died of the fever. I can vouch for this. Moreover, the Tamar had the fever on board, for two of her passengers died.*

In consequence of the prevalence of fever in Lisbon, free pratique is given to vessels from ports in Brazil declared suspected; from those called infected a new regulation is adopted—the passengers may at once land, but the baggage and goods must go to the lazaretto, and the ships, on being washed with some disinfecting liquid, may go to the Quadro.

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VIRGINIA

MEDICAL JOURNAL.

FEBRUARY 1858.

ART. I.—*The Pathology and Treatment of the Paralysis of Motion.* By J. P. BATCHELDER, M. D. of New York. (Continued from page 21.)

CASE II.—Thomas Kennedy, born in Ireland, twenty-six years of age, and a painter by profession, was admitted to the New York hospital Aug. 4th, 1856.

Nearly a year before admission he had been seized with intermittent fever of a tertian type, and suffered from relapses of this disease through the entire winter.

About three weeks before admission, while using white lead, he observed the first symptoms of his present disorder; still however having chills occasionally, and greatly debilitated by the malarious disease. His fingers became numb, principally on the posterior side, as did also his toes, on the upper side; and this feeling increased until he completely lost the use of them.

The advance of the disease cannot be very clearly traced. He says that he has never suffered from colic, nor does he know that any of his relatives were ever afflicted with it, though most of them are painters. The paralysis has gradually gained upon him, so that he has fallen into his present condition, and now has the dropped wrists characteristic of lead poisoning. His fingers are curved inward, so as to rest on the palm of the hand, and are so entirely useless that he is unable to feed himself. His toes are bent downward in

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a curious manner, the end of the toe nail resting on the ground. The muscles of the arms and legs are very much atrophied, especially those of the forearm, the ball of the thumb, and the calf of the leg.

He suffers considerably from pains of a burning character in his arms, the palms of his hands, his legs, and the soles of his feet.

He can move his arms and legs, but is unable to use his hands, or to take a single step. The nurse feeds him, &c. and lifts him in and out of bed.

In this condition, so far as paralysis is concerned, he continued until the 23d of April.

The foregoing, furnished by Dr. Anderson, the intelligent house physician, is an extract from the hospital records. To this young gentleman, as well as to several other *attachés* in the same capacity, I am much indebted for their politeness and hearty co-operation.

The judicious treatment to which this patient has been subjected since his admission into the hospital, has probably caused the elimination of every particle of lead from his system, and also removed the primary and long continued malarious influence beneath which, for a time, it succumbed. The case, therefore, presents principally the secondary and ultimate consequences of those poisons: From their conjoined influence, certain muscles in his limbs remaining long paralytically inactive, have not resisted the "passive contraction" of others; hence the great stiffness amounting to rigidity, with which these last are affected, and which nothing but considerable extraneous force can overcome; while the former, from long continued inactivity, have contracted the habit of inaction. This being the pathological condition of parts so far as the paralysis is concerned, two indications of cure are in the main, to be pursued:

1. To elongate and keep extended those muscles which are over-contracted.

2. To excite and bring under the control of the will those muscles which were in the first instance paralyzed, but are

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now inactive chiefly from habit. The other indications, as previously laid down in this paper, being less called for by the peculiar circumstances of the case, were not so particularly regarded in its treatment.

"The dropped wrist characteristic of lead poisoning" is not now as manifest as at first; and a change has likewise taken place in the condition of the fingers. The second and third phalanges are very strongly flexed by the action of the long flexors, (profundus and sublimis) of the fingers, while the first phalanx of each finger is almost as firmly drawn backward by the lumbricales, which being connected with the tendons of the sublimis and also with the aponeurotic expansion of the extensor tendons, act as extensors of the fingers, when the flexor sublimis is much contracted, and the fingers carried back of a line ranging with that of the metacarpal bones. Neither pronators nor supinators seem to have been much affected.

The state of the muscles, condition of the limbs and general appearance do not seem to be much different from what they were at the time of his admission. The treatment now (April 23, 1857) inaugurated was in accordance with the indications stated:

1. To overcome the resistance of the over contracted muscles, which was done as fast as the painful nature of the operation would admit, and retain by means of the glove and whalebone in the fingers, what had been acquired by force; and also by splints, &c. to the limbs.

May 12.—These agencies, the glove and pieces of whalebone, having accomplished about all that was to be expected from them, were laid aside, and gentle, passive motion (see Indication 2) impressed upon the limbs, was resorted to, the patient himself being enjoined to co-operate and of himself to make frequent efforts to move one limb or parts of it, by acting on it with the other. Besides these manipulations, he was several times a day lifted by two persons out of his chair, and placed on his feet.

In this attitude (his body and inferior extremities forming an angle of 180°) he was each time held a few moments

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only on account of the pain occasioned by it; but the distress diminished with each repetition. In a few days, by putting his hand on the arms of his chair, he raised himself further and further from its seat, and soon succeeded in getting entirely out of it, with little or no help; and holding on by his bed, hitched himself along its side from head to foot. He was then placed fully on his feet, and made to stand a few moments between two persons, holding on to them, and held up by them to prevent falling. In this situation he was compelled to bear more or less weight on his feet, or rather on the toes and plantar regions next them, because the gastrocnemii muscles, though atrophied and flabby to the feel when not in action, became exceedingly tense when put upon the stretch; and, contracting with all their force, drew up the heels so that in the attempt to stand, the right heel could not be made to touch the floor by three inches, and the left by two or two and a half inches. Thus fixed, he would sustain the whole weight of his body a short time. From standing he began to step, and then to walk—first assisted by two persons, then by one, and lastly, alone by the side of the partition wall—then a step or two by himself, relying however upon the guardianship of one or two persons to catch him if in danger of falling. Crutches were tried; but owing to the disabled state of his hands, he could make little or no use of them, and they were accordingly laid aside. He continued to improve rather rapidly under this mode of discipline, and soon assayed to walk alone—and now (May 25) walks, by short distances at a time, all about the ward, and has had but one fall. His gait is far from being easy and graceful; but judging of the future by the past, we are quite sure it will be not only improved, but quite natural.

June 8.—He can walk half the length of the ward without stopping, with his body tolerably erect, and his legs and arms under good command. Indeed, he is trying "to walk the crack," an experiment which all the paralytics like him have been required to make and persist in, until satisfactorily performed. In this he succeeds in bringing his feet

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much nearer the mark than was anticipated. He is directed to walk slowly at each step, and place his foot on the floor with as much precision as possible, on or near the crack. He has been several times laid up from over-doing.

June 23.—Went twice down into the yard from his ward in the second story in the hospital, and up again, without any one to assist him either in descending or ascending the lofty flights of stairs. The obstinately contracted state of his toes, as mentioned in Dr. Anderson's report, and an inverted nail,* have considerably interfered with his walking, and impeded his progressive improvement.

July 30.—Has continued to improve, and now walks comparatively well, keeping his body almost erect, and with much less of that waving or swagging motion which was so very characteristic of his gait even after he became able to walk about the ward, down stairs, and in the grounds. About this time an erysipelatous inflammation attacked the dorsum of his left foot, which, with the officiousness of one of the patients in cutting away about half the inverted portion of the nail, has prevented nearly all attempts at walking, and has put him back some six or eight weeks. He is now (September 11) beginning a little to resume his walking, which is only occasionally attempted on account of the pain and inconvenience which are excited by such efforts, and which accompany and follow them. These adverse occurrences have proved a matter of stern regret to the patient himself, and no small chagrin to his medical attendants—and to the writer in particular.

Case III.—Thomas Collins, 42 years of age, 30 years a sailor, of good constitution, and uniformly healthy, received a violent blow on the right side of the head, near the parietal eminence, which stunned him at the time, and indeed rendered him insensible for several hours—the next morning, however, he found himself quite well, and with the excep-

*The inverted toe nail is being rapidly cured, by the simple method described in the last July number of the N. Y. Journal of Medicine, p. 9.

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tion of a wound in the scalp, the consequence of the blow, and an occasional dizziness, which continued for 10 or 12 days, when he was attacked, November 23, 1856, with a severe headache, which commenced at the point where the blow had been inflicted, and spread over the right side of the head, to which it was mostly confined. The occasion of this pain was accompanied with vomiting, which was almost constant, and very distressing. The night following this attack he became quite stupid, and in 48 hours lost his senses—could retain nothing on his stomach and for 8 or 10 days after, although it was tolerably quiet, could take very little food. One morning, on attempting to get out of his berth (for he was on shipboard) he found himself unable to move the limbs on the right side, with no feeling in the right arm, as high up as the shoulder. The right lower extremity, though motionless and powerless, retained its sensibility. The muscles of the trunk were, as is usual in cases of hemiplegia, not affected.* In about six weeks the feeling in the arm and hand began to return, and somewhat earlier he had so far recovered the use of his leg as to be able to bear some weight on it; and soon to walk a little by holding on by the rails, but could not move his hand at all.

The following extract from the hospital record, made at the time of his admission (February 28, 1857) into that institution, is corroborative of the foregoing statement made by himself.

"On admission, his right arm was found to be almost completely paralysed with respect to motion—sensation was slightly impaired. It was disposed to be colder than the other, and very much smaller. He can walk without much trouble; but on his doing so, there is a perceptible drag of

* It is important to take this fact into the account when making up a differential diagnosis in relation to the degree of actually existing paralysis, because the patient, in his attempt to move his limbs, often exerts the muscles of the trunk in a manner which apparently gives the members range of movement that does not properly belong to them, and which they are utterly unable to accomplish by their own muscles.

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the right foot—such as is usually seen in hemiplegic subjects. Two months previously he had received a blow on the right side of the head."

His present condition (April 23, 1857) is as follows: He can raise the elbow to within 6 or 8 inches of a level with the shoulder, and flex the forearm to a right angle, or perhaps a little more with the arm, and slightly move the hand and fingers. The latter were much flexed, and rigidly maintained that condition. He can elevate the thigh to an angle of 180° with the trunk, but can hold the limb in that position only a minute or two. When he attempts to bend the leg on the thigh, he can scarcely raise the foot so as to separate the toes from the floor, without flexing the thigh on the pelvis. Speech, deglutition and the muscles of the face are not now, nor have they been at all affected from the first.

Much the same course was pursued in this as in the preceding case; and being a stout, healthy man, with a good constitution, hardened by his mode of living, not at all enfeebled by any of its indiscretions, he soon began to mend. In a week he could raise the arm and place the hand on the top and back of his head, and perform various other motions, which, when the treatment began, he could neither do, nor even be persuaded to attempt. On this account the limbs were at first moved by others, he being urged at the time to assist in the performance. His efforts in this respect were not much interfered with, nor resisted by the involuntary action of other muscles, awakened by such exertions—a contingency already noticed in the case of Batty. In a short time he found that he had a will of his own, and could impress its influence upon his limbs. When fully convinced of this, he entered with spirit into the plan; but with all his efforts he could not at first raise a four pound dumb bell from the bed, but at subsequent trials would take it up, and wield it in all directions with much apparent ease. In ten or twelve days he was desired to raise a small stool from one of the beds in the ward, but after making several trials, gave it up as impracticable. He was however

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instructed to make frequently repeated attempts during the remainder of that and the succeeding day. The next day the experiment was repeated with but little success, until he was encouraged to make another effort, with the assurance that he would be helped. The attempt was made, with my finger under the seat of the stool for the purpose of assisting, when with very little help from me the stool was raised about an inch from the bed.

Another effort was made under similar circumstances, and although no assistance whatever was rendered, the stool rose to the height of six or eight inches, and in a few days it was taken by the leg or round and wielded with considerable facility and energy. A large, heavy arm chair, which weighed three or four times as much as the stool, was now substituted, but could not be raised from the floor at all. The attempt was repeated with an assurance of help as in the former instance, but with no better success. He was directed to repeat the effort as often as he could, without producing any special inconvenience. The next day it was again repeated, with the same proffered assistance, and the chair was moved, but not raised from the floor. During each succeeding attempt the amount of help was gradually lessened, yet the chair continued to be moved with about the same degree of success, when at length it rose about an inch from the floor. These experiments were repeated from time to time until it was raised some six or eight inches, and held so elevated for a few seconds. He was now informed that the help was only in appearance, and that his late exploits were entirely the result of his own efforts. This greatly encouraged him, and after this discovery he experienced no difficulty in taking up the chair and carrying it half across the ward. The dumb bells were again brought into play—racing, jumping, pulling the rope with his fellow paralytics, assisting the nurse, &c. &c. were resorted to for exercise, and to give strength to the muscles.

In this as in most cases of the kind, the flexor muscles being naturally the strongest, acquired and maintained an

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ascendancy, but they were elongated by force, and their recontraction prevented by mechanical appliances. The long splint with the weight was omitted, on account of a suspicion of some disease in the wrist joint, which was not only very stiff, but painful. Pressing the articulating surfaces one against the other considerably aggravated the pain, which did not immediately cease on the removal of the pressure. The muscles of the paralyzed limbs were flaccid, flabby and atrophied, yet when an extending force was applied to the limb, they would become quite tense, and resist with a power which seemed incompatible with their apparently relaxed condition.

As a post-mortem in this case is not to be expected, we may be allowed to speculate a little on the circumstances which seem to characterize its pathology. We infer that the lesion of the brain caused by the blow was superficial, and primarily involved the pia mater and cortical substance of the organ. 1. By irritation and inflammation. 2. By effusion and consequent compression. The vomiting indicated the first, and loss of consciousness and sensation, the second; and the subsequent loss of motion evinced that the compression which resulted from the effusion affected deeper seated parts, as the medullary substance or motory tracts; but to no very considerable depth or degree. Thus far the paralysis is to be considered not the disease itself, but merely a symptom, the final cause or design of which, as a symptom, is identical with that of vomiting; both acting as depletents, were the medicaments of nature: The former prevented the reception of nutritive matter into the system; and the other, by keeping the patient still, prevented the evils which would have resulted from exertion. Every experienced physician knows full well that nausea and vomiting, taken in connection with other symptoms, are indicative of irritation and inflammation of the pia mater, through which the brain receives the blood, by which it is nourished, and its functions sustained. The return of consciousness



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and sensation, and also the power of motion, though in part only, showed conclusively that the disease which had occasioned their loss, had ceased; notwithstanding the patient did not move his limbs. Why? He ate, drank and slept well—had little or no pain, and was, to all appearance, quite well. Why then, we repeat, did he not move his limbs? Having abstained for so long a time from the exercise of his will, and the muscles, from contracting the habit of inactivity, had acquired an ascendancy more or less complete over his mind and physical organization. This being the case, all that was necessary in order to effect a cure, was to break up this habit of inaction, which was accomplished in the manner described. The will was revived by putting the limbs in motion, and directing his attention to their movements, and reconnected with the muscles, by urging and indeed insisting upon his co-operation. Very soon he began to give his assistance.

One word more. The direction of the mind to the muscles caused a determination of blood to them; and motion, whether voluntary or impressed by the hand of another, produced the same result—verifying in some degree the experiment of Von Humboldt, who states that "bending the thigh of an animal upon its sciatic nerve induced the muscles to contract."

It seems to follow as a corollary, that the more frequently muscles contract, and the oftener the mind is directed to them, the more blood will be derived to them, and as a consequence, their nutrition be increased—also their size and power augmented. In this case, the seat of injury and central lesion were on the right side of the head, and contrary to the usual course, the palsy was likewise on the same side.

Case iv.—Joseph Kanski, a Pole, and gardener by occupation, aged 45 years, was admitted into the New York hospital April 29, with paralysis of the right leg. Five months ago a heavy piece of iron fell upon the top of his head,

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which rendered him senseless for a short time. The accident was followed by pain of a throbbing character, which has troubled him ever since. Two months since he experienced a sense of numbness in his right foot and leg, which gradually extended up to the arm of the same side—also that of insects crawling over the leg, with spasmodic twitchings of the muscles. The temperature of the limb was natural.* Now, on his attempting to walk, dragging the foot is very observable, though he moves about without much trouble. He moves his arm freely in every direction. Sensation in the leg is somewhat blunted—in the arm, not at all. Reflex action is very marked in the leg, the slightest pinch causing it to twitch violently. His bowels are inclined to be constipated, and he has some difficulty in retaining his urine.

The above is the hospital record of this man's case, which, owing to the state of his mind at the time of admission, was all that could then be gathered. His mental faculties having since improved, he now (May 13) gives the following additional particulars: That at the time of the accident he had on his head a thick cap—notwithstanding considerable tumefaction at the place of injury immediately ensued; that he resumed his labors in the garden in the course of two or three hours, and continued from day to day to work as usual; that his sleep was very much broken, and his rest much disturbed; that he felt tired and bad every morning on rising from bed. He says that matters went on much in this way for three or four weeks, except that he seemed to be gradually getting worse, when he began to experience a sense of coldness (usually we believe the earliest premonitory symptom of approaching palsy) and numbness in the right foot, which gradually extended up to the arm and right side of the face. Sometimes he would feel as if all this side of his

* Had this patient put his limb in motion when he experienced these symptoms, and continued to do so, as he did subsequently, we can scarcely allow ourselves to doubt that the attack which followed would have been prevented.

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body was dead. When this sensation, which usually lasted about ten minutes, went off, he would walk round and round in a circle for a few minutes, and then fall, or be thrown to the ground, where he would lie four or five minutes, and then get up and go to work. These turns came on irregularly—sometimes twice a week, and sometimes oftener. He has had none of them or any thing of the kind the last two or three months. Previous to entering the hospital, on attempting to move about from place to place, he was often obliged to run to prevent falling. He has had no difficulty in swallowing, but much in articulating, which is not even now wholly overcome. He urinates ten or twelve times in the 24 hours, and discharges a larger quantity of water than before the accident. He has had all along and has now considerable trouble in his head, as pain and dizziness, with but little exact control over his right leg—indeed both legs appear to be somewhat affected. His gait is very unsteady—so much so, that one of the patients in the ward said, "he walks like a drunken man."

*Treatment.*—He was managed much in the usual way, by being placed sometimes with his back and sometimes his face against the side of the room, or in one position or another, had his limbs, particularly those of the right side, moved in various directions, he being exhorted to co-operate, &c. &c. He was then set to walking—very slowly, but with all the exactness and precision in his power. Having practiced in this way until he could use his legs with more certainty, he was required "to walk the crack," which was at first done awkwardly enough, but encouraged to persevere, and assisted by his companions, who had a better use of their legs, he soon began to improve, and continued to do so very rapidly, and in a few days performed in a manner very much to his own satisfaction. He can also stand a minute or two, with considerable steadiness on the afflicted foot, while the other is raised from the floor—a very difficult task for these patients to accomplish.

May 18.—This man, although he has improved very much

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so far as the paralysis is concerned, has a good deal of trouble in his head, for which a blister to the nape of the neck was prescribed by Dr. Griscom.

May 21.—Head considerably relieved. He now walks tolerably well, but is evidently quite weak. Suspicion of some indefinable trouble in the brain—ramollisment perhaps—has been entertained, and it was therefore deemed not prudent or expedient to push the treatment but moderately, lest his nervous energies should be over-taxed and exhausted.

May 25.—He is about the same as on the 18th. The nurse was directed to make arrangements for ascertaining the exact quantity of urine discharged, and the intelligent young gentlemen in attendance, to have it examined chemically and microscopically. I am not aware that this was ever effectually done.

This man continued to improve, so far as the paralysis was concerned, but slowly it is true, for the reason above assigned. During his convalescence he had frequent slight attacks of threatened paralysis, almost losing the use of his right arm or leg. Both were never affected at the same time. He was instructed to put the limb, whichever it was that was assailed, in motion, and keep it moving whenever he perceived the sense of numbness, &c. affecting it in the slightest degree, as the surest method of preventing a recurrence of the affection; and this he found invariably successful. For the difficulty in the head the medical gentlemen, Drs. Griscom and Smith, prescribed various remedies, by which he was somewhat relieved. Dr. Bulkley, when he came into service, put him upon a course of mercury, which lightly salivated and perfectly relieved him of the cerebral affection. He remained in the hospital up to the 21st of July, when he was discharged "cured." Notwithstanding, it was a matter of regret both to Dr. Bulkley and myself, that he was not retained in the house a few weeks longer, lest a relapse should occur.

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*Hospital Record of Robinson's Case.*

CASE V.—"James Robinson, aged 25, Vt. seaman, admitted May 28th. One year ago, while standing at the helm, he suddenly felt a sensation in his right foot, as if it were asleep, which soon extended to the arm, and in about fifteen minutes he found that he had lost all power over the limbs of that side.

He says the sun was very hot at the time, and shone directly upon that side of his body. He had no pain nor blindness then nor afterwards, nor was his power of speech affected. His general health was good.

For a week after the attack he was able to move about but little; after that time he began to improve.

At present he is able to walk tolerably well, but his control over the right leg is impaired. He moves his arm without difficulty, but complains of its weakness. It is tremulous when he extends it.

Bowels regular; appetite good; skin natural; renal secretion abundant."

*Additional Particulars concerning the Attack.*

In a week after the attack he was able, as stated in the hospital record, to get out of his cot and walk about, and near the same time the feeling in his leg returned; and on the 15th of June feeling came into his hand and arm. In a month or two—he does not exactly recollect the precise time—he began to have the power of motion, which commenced in his right thumb; and in two or three weeks after, he could move the arm, *first in the shoulder*, and in a week or two after this could flex the forearm at the elbow, but could not extend it. In three weeks more he could move the fingers.

It is true that he now (June 1) walks tolerably well, and moves his right arm without much apparent difficulty; yet

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it is obvious that these movements depend considerably on the motions of the body, particularly at their commencement; and they are likewise much influenced in their progress by the same agency, for when the trunk is confined, the motion of the limbs is constrained and restricted in no small degree. The right side of his face was and is now somewhat affected—also the right eye—so much so that he cannot read with it. The pupil is contracted and scarcely movable, and through it a slight haziness is perceptible. Motes are all the while present, and a spectrum resembling a half moon, constantly occupies a part of its field of vision on the sight. The tongue when protruded, inclines slightly to the affected side. The attack was at noonday, in a tropical climate (the Gulf of Mexico), under a hot sun, whose fierce rays fell, as stated above, with unbroken violence upon the affected side, which, from his position at the tiller, was most exposed.

Want of precision and power of motion constitute the principal characteristics of this case.

This man had previously been affected with syphilis, but at this time seems to be free from its contamination. Was this exposure to the intense heat and light of a burning tropical sun the exciting cause of the paralysis—particularly of the affection of the eye? The central brain proper does not appear to have been affected. Was it then the peripheral brain only?

Owing to the fact that, during the whole or most of his indisposition, he had been able to move his limbs; there was less muscular atrophy and rigidity than there would otherwise have been if motion had been suspended or much impaired. From all the circumstances of this case we inferred that the principal difficulty was located in the peripheral brain, to which allusion has been repeatedly made.

*Treatment.*—The usual course of training, as described in the other cases, was adopted and pursued; under which he improved for a time in a very satisfactory manner; but having reached a certain point he became quite indifferent about

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making further effort or progress,* and was, at his own request, discharged on the 29th of August, considerably improved.

Case vi.—David Lynch, Irishman, aged 25 years, occupation that of a farmer, experienced, in October 1856 a sense of weakness in the toes, more particularly the great toe of the left foot, which extended up the leg, and by the 1st of January following, affected the whole limb. In the course of this and the succeeding month, his legs—indeed all his limbs, arms as well as legs—became affected in much the same way. The sense of weakness in the upper extremities was first felt at the inner side of each forearm just above the wrist, from which it extended upwards, and occupied the whole of both limbs, although for a while it seemed to take possession of the biceps flexor muscle in each arm, where it paused and remained stationary for a short time, but soon began to spread in all directions over both arms. Of the two, the right was most affected. From the first, and through the whole progress of the complaint, there has been no diminution of feeling. All the functions of organic life have been normally performed, and he has been in perfect health, with the exception of a sense of general weakness, and an inability to move his limbs voluntarily.

The foregoing is the account of the case, as gathered from the patient himself, and his general appearance certainly confirms the latter part of the statement. His hands and wrists are large, not swollen, and appear as if they constituted parts of a powerful frame. His face is round, plump and ruddy. The muscles of expression, deglutition, articulation, respiration, and of the tongue, are all *intact.* The functions of

* This trait exhibited by Robinson is not uncommon with paralytics. Satisfied with having recovered to a certain extent, they are apt to decline further effort. They are well enough to carry on their business or enjoy life, and perhaps too lazy to endeavor to attain more ability. Why, then, they reason, should they give themselves any further trouble?

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the rectum and bladder are undisturbed. The movements of the head are in all directions perfect, and entirely under the control of the will. He can elevate or shrug the shoulders with unabated force. The intellectual faculties are unaffected.

The voluntary muscles seem to be the only organs out of order; and they from derangement or mere weakness of function. To the eye of the ordinary observer he appears, while at rest, in good health, but when in motion the feebleness of which he complains is manifest. When stripped the muscular atrophy which prevails, particularly in the limbs, is quite obvious. In the trunk it is less apparent. The muscles about the scapulæ and along the arm, even below the elbow, are much emaciated, while the hands, wrists and forearms, for two-thirds their length, are less affected. The muscles of the lower extremities are not as much atrophied as those of the upper, which is imputed to the fact that they had been more exercised by walking about, which, as he would do nothing else, he did as much as he was able. The muscles of the trunk, which he avers have fallen away, have to appearance held their own better than those of the extremities; and those which arise from the trunk and extend to the limbs, have suffered more than those which pertain exclusively to the body.

When he entered the hospital, he says he was so weak that he could scarcely get up into the ward without help, and only by pulling himself up by the balusters. Although he can walk about and move his arms, yet every motion is performed in an awkward manner. His limbs, particularly the arms, are moved mainly by impulses communicated to them by the trunk, and not by their own muscles—consequently very little in accordance with the will—but seemingly as they listed. When desired to bend the arms at the elbows, he declared, most pertinaciously, that he could not—that it was impossible; and when it was insisted that he should make the effort to do so, almost every muscle connected with the trunk and arms was brought into irregular



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action, as were those also which belonged exclusively to the body; for he tried with his might, but the forearm and hand would not come up. If moved at all, they would be moved in almost any other direction than the one intended.

The case was certainly anomalous. It would hardly be considered as one of pure paralysis, according to the strictly scientific meaning of the term. Is it an affliction of the brain? There is no dizziness—no vertigo—while the senses of sight, hearing and smell are intact. The inference is certainly against it. Is it a disease of the spinal marrow—softening or fatty degeneration of it, or of the muscles themselves? Was there a wasting of the anterior roots of the spinal nerves? Or was that portion of the peripheral brain located in the voluntary muscles mainly affected? To this opinion, the writer, considering the case somewhat analogous to that of the widow reported by Dr. Klaatsch,* is rather inclined. In her case the peripheral brain, in its sentient parts, was the seat of the affection. In this of

*"Dr. Klaatsch relates the case of a widow, aged 58, who applied to him, on account of severe pains in the extremities, and a powerless state of the upper ones, which prevented her from grasping any object firmly. She also complained of an irrelievable sense of hunger. In other respects, with the exception of occasional headaches, she was quite well; had had nine children, still menstruated moderately, and exhibited no symptoms of hysteria. An examination exhibited no appearance of paralysis, but the sense of feeling was lost over the entire skin and orifices of the mucous membranes, and could not be excited by pricking with needles. No unpleasant feeling was excited by irritating the nares, the conjunctivæ, or the mucous membrane of the mouth, and the fumes of ammonia produced no effect upon the respiratory organs. Boiling water and a prolonged application of the electrical pencil alone induced some feeling on the surface. The sense of contact was retained, and she was enabled to exactly indicate the spots at which she had been pricked. The power of distinguishing between differences of temperature was abolished, but the muscular sense remained, as she was conscious of the position of her limbs, and could determine the weight and size of a body, by grasping it. The senses of smell and taste were lost, and both hearing and vision were somewhat defective, although she had not before observed diminution in their power. The reflex excitability was very slight, the rapid application of hot sponges exciting but slight movements. Tickling of the fauces did not induce any disposition to vomit. This patient was restored by electricity. There were no symptoms of hysteria."—Medical Times and Gazette, June 30, 1857, from Deutsche Klinick, No. 45. Republished in the Med. News, August 1857.

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Lynch, it is the peripheral brain pertaining to the muscles of animal life. No definite opinions were, we believe, formed by the medical faculty attached to the institution at the time of his admission—at least we heard none expressed.

### *Peripheral Brain.*

The neurilemma is the fibrous sheath which invests the nerve cords from their exit or passage through the bony casement which includes the cerebro-spinal axis—the central brain, to their termination in the ultimate fibres. The design and use of this investing membrane is to secure the nerve cord from being acted on by the parts through which it passes, and to prevent them from being acted on by it in its transit. The nerve fibres, at their origin in the brain and spinal marrow, and also at their distal termination, are uninvested.* At this extremity the ultimate fibres and the branches or primitive fibres into which they break up, mingle with the substances by which they are surrounded, and with which they are in immediate contact. These unneurilemmated termini, remific or motific, according to the nerves of which they form a part, constitute what we mean by the peripheral brain, which in many instances manifests itself quite independently of its congener, the central brain. For example: The heart of a frog, some minutes after exsection, is made to palpitate, by pricking it with a needle—thus furnishing undeniable proof that the portion of nerves, intermingled with its fibres, possesses the power of feeling and

* Every nerve fibre, in its course, proceeds uninterruptedly from its origin at a nervous centre to its destination, whether this be at the periphery of the body, in a nervous centre, or in the same centre whence it issued. In the whole of its course, also, however long, there is no branching, or anastomosis or union with the substance of any other fibres." * * * *

"Hence the central extremity of each fibre is connected with the peripheral extremity of a single nervous fibre only; and this peripheral extremity is in direct relation with only one point of the brain, spinal cord, or nervous centre; so that, corresponding to the many millions of primitive fibres which are distributed to peripheral parts of the body, there are the same number of peripheral parts of the body represented in the nervous centres."—Paget's Manual of Physiology, p. 279, 280.

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also of motion. Perception is the function performed at the extremity of the nerve, by the peripheral brain. The change there produced is communicated, telegraphically if you please, to the central brain, by which a change is there effected, that is productive of thought. The first change is modified by the physical or other properties peculiar to the cause; which modification is likewise communicated to the brain proper, in which a correspondent modification of change is produced; in consequence of which, an idea of the character and nature of the cause is induced. When these operations have been performed a number of times, the individual acquires the power of reproducing, by a voluntary effort, the identical change in the cerebrum, which is followed by the same change as formerly in the peripheral brain; and thus, by an effort of the will, he can re-excite the idea of the agent which originally caused the aforesaid operations, &c. whether they be sensitive or motive.

The prevailing sentiment was in favor of the course of treatment which had been so successful in the other cases, and the following process was adopted. He was placed with his back against the wall, and held steadily there. Each hand was taken in one of mine, and he admonished to stand in the most careless manner, and make no effort of his own—none at all—but leave the matter entirely to my management: He was only to observe attentively the procedure. His hands were now brought a little forward by flexing the elbows; but even this *per se* was found to be impracticable, because almost every muscle would as before mentioned, be called into action. To prevent this, the arms were confined at the elbows and the shoulders, and upper part of the trunk, by assistants. Under these restraints the elbows were flexed—a very little only, while he was assured, in the most careless manner possible, that a slight degree of motion only was all that was wanted, and that we did not care about his rendering any assistance whatever—that all we desired of him was merely to permit the movements to be made. The object of this was to have his attention, inadvertently as it

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were, directed to these motions, which were being thus effected, without exciting others which were undesired to accomplish certain co-ordinate actions without calling into play certain others, which were any thing but co-ordinate. In the course of half an hour thus spent, this point was in a measure gained, when it was remarked, in the same careless manner, that he might assist a very little if he pleased, and his attention was by the application of his hand, directed to the movements of the biceps flexor muscle in my arm, which took place when my hand was being raised—from mine to this part in his own arm his hand was transferred, and he was desired to note whether he could perceive any movement there when his hand was raised, and he was not long in discovering the fact that motion was likewise there. This was probably the first time in his life that he had been fully conscious that here was lodged the agent by which the hands were raised. After this discovery he was desired to make that action a little more effectual, and soon found that by fixing his mind on that part, and willing to have the hand ascend, it would rise a little distance only, to be sure. He was now desired to think the matter over, and occasionally endeavor to make this single muscle contract without calling any others into action, and he was not long in acquiring some influence over it and nearly all the muscles of his limbs. This influence was very feeble, and at times seemed to be almost entirely dependent on the movements of the trunk. Walking very slowly and carefully was enjoined. He was desired every time he put his foot down to mark the spot where the tread was to fall, and soon was called on "to walk the crack," which was at first done very awkwardly, but in a short time his improvement was quite evident. From walking—running, jumping, hopping, balancing the broom, brush end up, &c. &c. were assayed, but rather indifferently performed. To these the india rubber foot, and small hand ball were added; also, the rubber parlor ball suspended at different heights by a cord, was displayed, at which he was to strike with the open hands as often as it

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swung near him. When fatigued, these exercises or amusements in which the other paralytics and inmates of the ward joined, were to be suspended. Being an Irishman, he took much pleasure in fisticuffing a pillow which was from time to time held up for the purpose. His improvement was very slow, and at times, especially if he over-acted, was suspended or entirely interrupted for two or three weeks at a time. He was particularly delighted with the exercise of striking the suspended parlor ball, and over-did the matter, and has not only not advanced, but has actually retrograded so far as power is concerned; but he has now, September 9, more definite control over his forearms and hands than I have before witnessed. He indeed raised the hands nearly to a level, and almost in contact with his shoulders with but very little (almost none) of the accompanying action of other muscles, which had hitherto been so officious.

*Hospital Record of the Case of Andrew Lottimer.*

Case vii.—Andrew Lottimer, admitted May 20. While lying in bed on Sunday morning playing with his children, he suddenly became insensible. After he came to himself, his wife told him that he had been insensible for two hours—that he had foamed at the mouth. When he recovered his senses, his left hand felt larger than natural, and gave him the impression that it was another person's hand. On attempting to move it, he found it paralyzed. His tongue protrudes to the left, and is slightly coated. The left hand is completely paralyzed, but sensation is restored. He is able to move the leg of that side, but says that it gives way when he attempts to walk. His pupils are unaffected; skin natural; pulse 54; bowels constipated; person corpulent. He is in the habit of using spirituous liquors. Had drunk some on Saturday. Ordered cathartic treatment.

July 29.—Is able to walk, but halts considerably. Can balance himself for a moment on the paralyzed leg. His

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left shoulder hangs lower than the other. He can nearly close the hand and raise the arm to a level with the shoulder. Extends the hand and fingers with some difficulty, but says he can use it much better in the morning than at night. Tongue protruded to the affected side. Speech somewhat thick. Put under Dr. Batchelder's care for gymnastic exercise.

August 29.—Has sufficient use of his hand to go to work, though it is not as strong as the other. The shoulder still drops some. Halts some on the left leg. Cured."

We have gleaned the following additional particulars from the patient himself. For six months previous to the attack, his left leg had been somewhat affected with cramps when in bed, which went off almost immediately on getting up and walking about. A while after the attack he began to experience a sensation of increased warmth, (the earliest sign of improvement, according to our observation and experience), in the affected foot, but no change of feeling was perceived in the hand or arm. Not long after this, he commenced *trying to move the toes, and then the foot, and soon succeeded in both attempts*, but in a moderate degree. He was taken out of bed, and placed in a chair by others, in which he remained until the bed was made, and then replaced in it in the same manner. Subsequently, when taken out of bed, he was raised and placed on his feet, on which he was allowed to bear some weight, when the nurse said to him one day, that "he must try to walk, by taking hold of things," &c. To this he replied, "that he was going to walk on the 4th of July, which was only two or three days ahead." Although nobody believed him, his own mind during the interim was very much occupied and exercised with the idea of doing what he had announced that he would do on that day, and he was as good as his word. He got up, or rather was gotten up, placed on his feet, and walked the whole length of the ward without help, and continued to walk about more or less every day, and to improve slightly in this mode of exercise. Up to this time (July 29) the improvement in the upper extremity had been much slower.

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The course of treatment was much the same as in the other cases, which have been given in detail. He was placed against the wall—sometimes with the face and sometimes the back in contact with it, and his limbs moved, &c. The long splint and weight were applied to the arm, and removed several times in the day—with other and various kinds of exercise, appliances and devices for bringing the muscles into various and gentle modes of action. Although he could walk, to stand and maintain a standing on the affected limb alone, was a very difficult attainment, and at first impossible, but was ere long accomplished. After considerable training, by short steps, long steps, pacing the ward in its length, but very slowly, the india rubber foot ball was introduced, and the patient directed to kick it with either foot wherever he could find it. In this exercise other inmates of the ward besides the paralytics joined with great gusto, and it was not long in coming to be a favorite exercise with all who could join in the sport, and a matter of infinite amusement to those who from infirmity could not take a part. The paralytic patients were, however, directed to quit the fun as soon as they began to feel the slightest fatigue.

This man continued to improve up to the 29th of August, when he was discharged "cured," as stated in the hospital report.

September 3—He called on me at my office this morning, having walked all the way from home, several miles. He looks well, and says he shall go to work next Monday. He was cautioned to be very exceedingly careful not to over-do.

*Partial Paralysis—(Written by Dr. Dubois.)*

Case viii.—Abner H. Clyde, aged 25, N. Hampshire, seaman, admitted February 16, 1857, (Dr. Van Buren,) with slight frost-bites on ends of four fingers of right hand and the three middle ones of left, which he first noticed two weeks ago, and probably caused by pulling in ropes at sea which were covered with ice. The skin only is involved, of

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a pale tallowy color, hard and insensible. He has also paralysis of extensor muscles of left wrist and hand, causing dropping of that hand exactly similar to that caused by poisoning by lead. He has not been exposed to contamination by lead in any way, that can be ascertained. He says that 8 days ago he got into a fight on shore, and was struck on the left side of head with a piece of rope, and also across the loins. He was stunned and knocked down by the blow, but soon recovered consciousness. Four days after, he first noticed this dropping of left hand. There is partial paralysis also of the flexors of the hand and wrist, and also of the flexors of elbow.

*Treatment.*—Ends of fingers painted with tr. iodine.

February 22.—Ordered sol. iod. pot. ℥ss. ter in die. Dead skin has been removed from ends of fingers.

March 1.—Not much improvement. C. T. Fingers about well.

March 10.—He can now bend his elbow without much difficulty, and when his hand is held back pretty strongly. Dropping of wrist continues the same.

March 19.—Not much change in the paralysis. Takes now sol. iod. pot. ter in die.

March 30.—Can now grasp with more force. C. T.

April 18.—Takes iod. pot. grs. xv, ter in die, and general stimulants. Thinks he is gaining slightly in power over his fingers. He cannot move his wrist.

April 21.—Ordered T. nucis vomi, gtt. xl, aq. ℥iv, ℥ss. ter in die. Stop iod. pot.

May 11.—Since April 25, patient has taken T. N. vomi, ʒi, aq. ℥iv, ℥ss. ter in die, and says that he gains slowly some power over his fingers. He cannot raise his wrist, but can grasp with his hand pretty firmly. Patient placed under Dr. Batchelder.

June 2.—Patient has rapidly regained the use of his fingers and wrist under Dr. B.'s treatment.

May 11.—As stated above, this patient came under treatment. In my minutes it is stated that the left hand is



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dropped, and the fingers obstinately flexed, as in lead palsy. No effort of his can raise the former or straighten the latter. In his attempts to do so, various muscles in other parts of the body, particularly in the opposite leg, near and about the ankle and foot, are called into vigorous action. The movable splint was applied as in the other cases, which he was instructed to keep in motion as much as possible, and to have it removed from time to time, to exercise the hand and fingers as well when it was off as when in place. The glove and whalebone strips were also applied. In less than 48 hours, signs of improvement became apparent, and in 3 or 4 days he could raise the hand to a level with or in a line with the forearm, and also considerably extend the fingers, and separate them one from the other, about half an inch at the ends. When raised, the hand could be maintained a few seconds in that position. The power of motion continued to increase until, at the end of two weeks, he began to talk of leaving the hospital, and on the 2d of June was, with the consent of Dr. Griscom, discharged "cured." Since which, he has not been heard from.

In this case, smart percussion on the cervical vertebræ over the origin of the nerves which go to the arms, or sudden and even violent twisting of these parts gave no pain or uneasiness. Therefore, the inference was that neither the bones nor ligaments nor intervertebral cartilages were affected. The sense of feeling was not affected. The disease could not, it was thought, be attributed to the blow on the head, as no symptoms indicated trouble in the brain, nor indeed any which complicated the spinal marrow. Exposure to cold was the probable cause of the loss of motion. The seat of the affection is not in the central, but peripheral brain—that portion of it pertaining to the muscles whose functions failed.

Case ix.—"Martin Quigley, New York, seaman, was admitted into the New York Hospital April 18. Patient comes in with partial paralysis of the left hand. His wrist

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has the peculiar drop, characteristic of saturnine disease. He is unable to raise the hand, or to extend it on the wrist, though he can move his arm without any trouble. The fingers curve slightly towards the palm. He ascribes his disease to the fact of his having slept with his head resting on his forearm, after having been engaged all the preceding day in wheeling heavy loads of coal. He lost the use of his hand, he says, from this cause. Otherwise he is strong and healthy."

The foregoing is the hospital record of Quigley's case at the time of admission.

On the 23d instant, five days after admission, the following course of treatment was adopted: a splint was applied to the forearm, reaching from near the elbow to the ends of the fingers, which kept them and the wrist extended in a line with the forearm. As this splint while in place prevented motion, it was laid aside, and another contrivance substituted, which consisted of a kid glove drawn upon the hand; between the digits of which, and the palmar surface of each finger (forcibly straightened) a narrow piece of whalebone six inches long was passed. The thumb was treated in the same way. These whalebone splints kept the fingers completely extended, without interfering in the least with the movements of the hand at the wrist. To bring and keep the origin and insertion of the extensors of the wrist and fingers nearer to each other and enable the muscles to gather strength from the passive contraction already alluded to, and also to bring them under the control of the will, a wooden splint, as before described, was bound rather firmly upon the palmar surface of the hand, by passing a roller two or three times round the fingers, and once or twice round the hand, between the thumb and wrist, in such a manner as not to interfere with the motions of either the hand or wrist. To the upper end of this splint was appended a weight by means of a large wire bent in the form of an S, one end of which was hooked into a hole in the splint, and upon the other was hitched a

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weight sufficiently heavy to keep the hand back in a direction approaching a right angle with the forearm. This weight did not prevent the contraction of the flexors when subjected to the influence of the will; the patient was therefore directed, by contracting them, to keep the hand in motion as much as he could well do. The moment the flexors ceased to contract, the weight at the end of the splint would bring the hand back to the position described. The arm was now placed in a sling, which excluded the splint, and the patient desired to allow it to remain resting therein as carelessly as possible. The design of the sling was to prevent fatigue, and more especially to favor the influence of the splint and weight in persistently resisting the excessive action of the flexors, which militated so much against the cure, and likewise to accomplish the objects in view, without exciting other muscles to contract, whose action was not wanted.

Notwithstanding this arrangement, and all our injunctions to the contrary, these muscles would act whenever he attempted to extend the hand and fingers with any decided voluntary effort. In consequence of this condition of things, he was desired to keep the hand in motion, in an easy careless way, so little under the influence of the will as not to bring other muscles into play, and to keep his attention to the movements thus going on, particularly those by which the hand was extended.

May 23.—Discharged "cured."

Case x.—Matthew Farrell, 31 years of age, a baker by trade, received on the 27th of last May a heavy blow from an axe on the middle of the left parietal bone, which fractured the skull, and knocked him down. He was unable to speak for some time, and has had trouble in articulating ever since, but is now much improved in this particular. The right arm and leg were rendered motionless, and continued so for a short time. He can now (June 8th) readily move them, with the exception of the right hand and fingers, the

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present seat of the paralysis. Flexors and extensors are both affected—the former much less than the latter—consequently the fingers are continually bent and cannot be straightened, or indeed rarely affected by the extensors. The hand also drops, and cannot be raised to a level with the forearm. When he makes a strong effort to raise it, almost all the muscles of volition, not immediately concerned in that effort, take on vigorous abnormal action, while those whose contraction should elevate the hand, are most provokingly quiet.

June 9.—He came under treatment yesterday, and thinks he has improved a little. Spent more than half an hour with him in trying to teach him how to cause the extensors of the wrist and fingers to act, and finally succeeded in getting him to move the hand backward about half an inch. As the supinator longus does not appear in such cases, and especially in the drop hand from lead, to be much affected, the thought occurred that if this muscle could be made to act, the two radial extensors, which are much in the habit of acting with the supinator longus, might be induced to renew their former habit of acting co-ordinately, which was found to be as true in practice as plausible in theory. Profiting by this piece of strategy, and persuading Farrell, when making extension to supinate the hand strongly, it was soon apparent that its extension would be increased an inch or more, without exciting other muscles in the arm or other parts of the body to efforts not called for or desired. Although aware that the supinator longus was generally exempt or not applied in paralysis from lead poisoning, it had never until now occurred that this fact could be turned to account in the education of these muscles.

June 13.—Discharged "cured."

This man continued to improve very rapidly till the 13th, when he left the hospital. Since which, no information in relation to him has been obtained. I have not been able to

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get the hospital record of his precise condition at the time of his leaving that institution.*

Case xi.—Thomas McCuen, aged 30, by trade a boiler maker, was, on the 22d of March 1857, thrown from a rail road car with great violence upon the ground—was stunned, and remained in a state of insensibility for a considerable time—he does not know exactly how long—but when consciousness returned, found he could not move the limbs on the right side—they were motionless, but not insensible. In about four weeks he began to move the limbs a little—the legs first, and then the arm. When lifted up and placed on his feet, he could stand alone. In a few days he began to step a little, when supported by two assistants. He can now (May 16, 1857,) walk tolerably well on a level surface, but finds it difficult to raise his feet, particularly the right one, but a few inches only from the floor. During the first week after the accident his water was drawn off, but now he can empty the bladder without the assistance of the surgeon. His bowels are costive, and have not been moved since the accident, except by cathartic medicines. Although he can move the arm in almost any direction, he cannot extend the hand and fingers, neither can he close them, particularly the fingers, but very imperfectly. When thrown from the cars the right side of his body and head came in contact with the ground. On the latter, two wounds were made—one on the middle of the left parietal bone, and the other over the sagittal suture, about midway between the anterior and posterior fontanels.

*Treatment*—Much the same as that practiced in other cases. The glove and whalebone splints, and splint with the weight, were principally employed for the recovery of the hand, with the happiest effects. He came under treatment on the 16th, and was discharged "cured" on the 29th.

* Not succeeding in getting a report of this man's case from the books of the hospital, the foregoing account of his case was taken from his own lips.

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I have not been able to get a copy of the record of this man's case, as it was entered upon the hospital books. The foregoing account of his case was gathered from himself on the 16th of May, and subsequently. I have no doubt of its correctness and accuracy, for he, as well as the others, was cross-examined with a good deal of closeness and care.

[To be continued.]

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ART. II.—*Epidemic Erysipelas.* By ALBAN S. PAYNE, M. D. Paris, Fauquier county, Virginia.

BEING much gratified by reading in the Journal (vol. 9, No. 5) an exceedingly interesting paper, from the pen of my friend, Dr. W. W. Parker, upon the propriety of large doses of muriatic tinct. iron in vesicular erysipelas, I have thereby been induced to send this paper for insertion in your periodical, much earlier than I had previously anticipated. The result of my experience in the exhibition of this remedy being somewhat corroborative of Dr. P.'s expressed views, I therefore send this communication to serve as a sort of sequence to Dr. Parker's paper. This paper would have appeared in the July No. 1857, had I not received "ad interim" the appointment as chairman of a committee to report to the "Medical society" upon the "Epidemics of Tide Water Virginia." I thereupon concluded to retain it, along with several others, to hand in as a supplement to that report. But now looking upon my friend (the muriatic tincture) as fairly up for popular favor, I should do violence to my own feelings, were I to hesitate to say at once a few words in defence of so old an acquaintance. As far back as 1849 I communicated to my distinguished friend, Dr. George M. Brown, late of Fauquier county, Virginia, more recently of the state of Georgia, some gratifying experiments I had instituted in the treatment of erysipelas by the sulph. iron,

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both by its topical application and internal administration, during an epidemic of that disease which I had encountered in the Empire State between the years 1842 and 1846. I further communicated to him my intention of substituting the muriatic tincture in place of the sulphate whenever another opportunity offered itself. A convert to the views of the great French surgeon, M. Velpeau, I believed erysipelatous diseases generally the result of a specific poison, which deprived the blood of the iron that was a "sine qua non" for healthy blood. I moreover thought the muriatic tincture likely to prove the best antidote, as it could the more easily and readily be absorbed by the absorbent vessels, and by them carried into the system. This epidemic of 1850 afforded me the desired opportunity of testing its virtues in almost every phase of this disease; and the following paper is the result of this experience, acquired during this epidemic, and those "sporadic" cases of this disease which have occurred since, and running through a period of some seven years.

In noticing the epidemics which have visited this portion of the Piedmont region, I shall not, as a general thing, attempt to give their etiology and semiology, only so far as they may present some deviation from their regular mode of procedure in their inception or subsequent course. Neither shall I desire to support by written argument, my own views in reference to their causation or of their pathological condition, contenting myself with simply waiving my own opinion upon the subject under discussion, without comment. Typhoid fever and erysipelatous fever, being diseases of unusual interest to the profession, as well as of vital popular importance, may form an exception to this general rule of action by which I shall be governed. The remedies, dose and mode of administration, &c. &c. will only be given in detail, when they may have manifested some superior efficacy in combatting the disease passing under review—or rather, I should say, have proved themselves particularly serviceable in assisting "vis medicatrix naturæ" in her

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praiseworthy efforts to throw off and eradicate disease from the human system.

Epidemic erysipelas paid its first visit to this section of country early in January 1850. Its approach was from the southwest, having prevailed to an alarming extent, for several months past, in those counties lying southwest of the Blue Ridge, and washed by the limpid waters of the Rappahannock and Shenandoah rivers. The prevailing winds for the years 1849 and 1850, blew principally from the south and southwest. This forms an exception to what is most common in this mountainous region, the winds generally blowing from the north and northwest.

Late in December 1849, I learned that a lady, residing some ten miles distant, had nine servants down with a strange sort of a fever, and that she lost seven out of the nine. In a few days I was called to see a young lady, residing two or three miles this side of her, and saw my first case of epidemic erysipelas since my residence in Virginia. I feel justified in asserting that the full force of this epidemic was spent during the months of January, February and March. Commencing early in January, it lingered late in "the lap of the following spring," and departed by early June. Since then it has appeared quite contented with affording to us an occasional sporadic case or so. So far as I am capable of judging of the season, the time of the year in which it thus unceremoniously precipitated itself in our midst, presented nothing abnormal in respect to atmospheric phenomena; and no decided evidences of morbific effluvia could be said to be present, if we omit to mention that for a year or two past a "typhoid diathesis" had been manifesting a maternal solicitude in our welfare, and was then hovering around these proud old hills. Nor do we discover any thing calculated to favor the growth and development of erysipelas, by looking to the geological strata of this region. It is true, in erysipelas we think we can discover that it manifests a penchant to follow somewhat in the wake of large water courses, (flattering us with surmises of miasm, mias-



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mata and the like;) but the why and the wherefore, are secrets as yet hidden in the dark and mysterious arcana of nature; and furthermore, here they must remain until the etherial analyzer can lay bare the constituent elements of the air during the prevalence of epidemics, with as much truth and certainty as the chemist at this day explores the vegetable and mineral kingdoms.

Erysipelas is a disease unquestionably "sui generis." It has flourished under several popular cognomens, such as "putrid sore throat," "black tongue," "the spotted fever," and the like. Is this disease contagious? This is a question of paramount importance not only to the investigator of medical science, but to the populace at large. One great difficulty in arriving at any definite conclusions as to the contagion, or noncontagion of a disease, I am persuaded arises from the too great latitude given to the definition of the word "contagion" by the older and more systematic medical writers. I think the definition of the term, if intended to mean any thing positive, demands that it should be curtailed of some of its fair proportions. In the present sense of its signification, in which this term is used, it strikes my mind as being too vague and indefinite, and rather appears as if prepared with care, to cover a great deal too much ground, and yet withal seems perfectly noncommittal in its character. The same objections may be urged with propriety against the term "infection." For if you mean to signify by the term "contagious," a disease that transmits its disease from one person to another, by direct or indirect contact, without the assistance of any predisposing cause to be furnished by the human system, I should then unhesitatingly pronounce this disease by no means contagious, and should contend that very few diseases were so, strictly speaking. But if you mean by "contagious" to signify a disease from which emanations may arise during its progress, capable of exciting a similar disease in those exposed to the influence of these noxious emanations, I will say, then, that this disease is contagious, and that most epidemic diseases

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are so, to a greater or less extent, only requiring for their successful propagation, that a predisposing cause should be furnished by the human system. For then you have an exciting and a predisposing cause—an exciting cause furnished by a foul, de-oxygenized atmosphere, and a predisposing cause, to be furnished by a system previously worn down and debilitated by another disease, or by want of rest, by anxiety, fatigue or fear—causes always furnished by watching at the bedside of the sick, and sufficient of themselves (without the aid of an exciting cause), under certain circumstances (which we will term "epidemic influence"), to produce disease. Infection by definition is as unfortunate and indefinite—nor are the terms "specific contagion" and "contingent contagion," as defined at the present day, by any means explicit and to the point. To my mind, Dr. I. Mather Smith's division of this subject into "idio kino miasm," and "per idio kino miasm," is the most sensible as well as satisfactory exposition of this complicated subject that I have seen. By "idio kino miasm," I presume he means that specific contagion, capable under certain circumstances of producing typhoid fever—and by "per idio kino miasm," that which produces typhous gravior, and is generated by animal filth, &c. &c. The other, by vegetable exhalations, climatic alternations, &c. &c.

I hope I may be pardoned for offering these crude remarks upon this interesting and exciting subject; and when I come to speak of typhoid fever, I shall beg the privilege of speaking on this point still more "in extenso." The longer I practice my profession, the more I am disposed to look for the causation of epidemics and fevers in some indefined electrical condition of the atmosphere, and the less I am disposed to believe in the theories of animalculæ, ozone "et id omne genus." Let the modus operandi by which this specific poison is generated be what it may (whether by climatic alternations, vegetable effluvia, or from bodily exhalations), the result is the same. Nor do I care how this specific poison is transported into the system (whether by inha-

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lation, inspiration, endosmos or by nervous imbibition), still the result is the same. The blood, either primarily or secondarily, is by its action deprived of one of its essential component parts. I mean the result of this specific poison is the deprivation of the blood of its iron.

I have now encountered erysipelas twice as an epidemic—the first time during my residence in New York state between the years 1842 and 1846; the second, in Virginia in 1850. I have had also some experience in treating it as a "sporadic" disease for the last fifteen years; and from this experience, from analogy, and from all the sources and avenues of information to which I have had access, I feel myself justified in believing that it is a disease owing its origin, growth and development to some invisible, indefinable blood poison. I further believe that this specific poison—I care not how it is generated, I care not how it is transported into the system, combining with some of the constituents of the blood, for which it has a greater chemical affinity than they have for one another, and thereby destroying its chemical status or equilibrium, new combinations are formed by which the blood is the loser of its metallic elements. Whilst I am not at the present time prepared to deny that epidemic erysipelas, in a general way, does manifest some "elective affinity" for the areolar tissues, nevertheless it is far from being invariably so in its action, and we often find the disease commencing in the tegumentary tissues, and rapidly spreading to the mucous, serous, and all the intervening tissues, invading the very muscles themselves.

According to my pathological view of this disease, I am wholly unable to explain why it ever should manifest any "elective affinity" for the cellular tissues; but then, I never could, for the life of me, satisfy myself why one cow should be provided with horns, and another be totally deprived of these useful ornaments. These, I suppose, are the secrets of nature, and are well calculated to turn the contemplative mind of man from nature to nature's god. This disease, during the prevalence of this epidemic, at times gave very

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strong evidences of being contagious in other instances. You could trace no connection between the recent and the preceding cases.

The starting point of my history of this epidemic I locate at this lady's house, where seven deaths occurred out of nine cases. The specific poison, it is fair to infer, from the number of deaths, was generated at this point in as large quantities, and was as violent in its character as at any other point during its prevalence. Indeed, we might, with a fair share of propriety, be justified in denominating this the "fons et origo" from which the other cases arose, being in a direct line of communication. Yet, in the face of all this, we find that a lady and an old colored woman, from my immediate neighborhood, visited this family, and actually served as nurses through the whole period of their sickness, neither of whom ever had erysipelas in any form whatever. Nor had there been any visiting or intercourse whatever between the family of my first patient and this infected locality. My patient's house was situated some two or three miles to the northward of this locality, in a direct line from which direction a south wind had been blowing for some days past with considerable freshness. After this, when the disease had become more diffused, instances could be enumerated where persons in supposed health visiting an infected house would go home and in a few days would be seized with erysipelas. This disease made its appearance under so many different phases, differing the one so materially from another, that I feel sure I shall simplify the subject, as well as the treatment thereof, by considering them under six different and separate heads, giving to each variety a name purely nominal, yet somewhat in accordance with the symptoms displayed by each.

### *I.—Cutaneous or Erythematous Erysipelas.*

The symptoms making this variety, were a general feeling of "malaise," accompanied by slight anginose symptoms,

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such as pain over the frontal sinuses, coryza, defluxion from the eyes and nose, tongue coated with a white fur, bearing a resemblance to the white strawberry, bowels constipated, or possibly a slight diarrhœa, pulse slightly accelerated, and decidedly compressible. These symptoms to be quickly superseded by intense itching and an "erythematous blush" pervading the whole surface of the body. In the mildest cases of this variety, where there was not much disturbance to the system at large, convalescence was established by the topical application of the mur. tinct. iron alone, to be applied every fourth hour. In those cases requiring medication, the bowels to be gently moved by hyd. cum creta, followed next day by castor oil. If diarrhœa, subm. hyd. and pulvis Doveri to be given until the bowels become regulated—15 to 20 grains sulp. quinine each morning—with 20 to 30 drops mur. tinct. iron, morning, noon and night, to be continued at least four days, whether convalescence is established or not. The whole dermoid tissue to be painted over with the muriatic tincture of iron morning, noon and night. This plan, in conjunction with sudorific tisanes, to be taken at regular intervals, constitutes the amount of treatment required for this variety.

### *II.—Bilious or Epidemic Erysipelas.*

The symptoms, ushering in an attack of this variety, were generally of a much higher grade of pyrexia—such as intense cephalalgia, accompanied by sore throat, more or less severe, enlarged tonsils, and a general swelling and tenderness of the lymphatic glands in the neck, painful deglutition, occasionally painful and hurried respiration, accompanied with great lassitude and pain in the limbs, with frequent nausea and vomiting; the tongue covered with a white, slimy fur, tinged with a deep brown bilious coating, beneath which the papillæ might be seen peeping through with a deep scarlet hue; uvula elongated, with a relaxed condition of the soft parts of the throat, generally producing symp-

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toms resembling ptyalism; the breath uncommonly offensive; the bowels were generally found more or less constipated, sometimes insensible to the impression of the simpler cathartics, but more frequently easily moved; the pulse was usually frequent, compressible and vascillating, and accompanied with a fever, continued in its character; the body often bathed in a cold, clammy, sour perspiration, with an expression at once haggard and shrunken. Again—the attack would be suddenly announced by a decided chill, which would last through a much longer period than is usual in intermittents, and even when the body to the touch was preternaturally warm. These symptoms are to be succeeded in their turn by an inflammation of the whole dermoid tissues, along with pain in the head, abdomen, back and joints, or some or all of these at the same time.

My treatment of this epidemic was based upon general principles, mindful, however, that for some time past our neighborhood had been suffering from the dire effects of a "typhoid influence." In those cases manifestly having their origin in a bilious derangement, or rather accompanied by a sluggish state of the liver, I premised my treatment by clearing out the alimentary canal by the mildest cathartic that would answer the purpose, and attempt to stimulate the secretory organs, and improve the secretions themselves. With this class of remedies I would so combine another calculated to sustain the energies of the system, and protect the nerve force. The following powder appeared to serve a good purpose in the commencement of these cases: Pubis ipecac. grs. ss; sub. mur. hydr. gr. i; nitrate potassa, grs. iii, mixed. A powder to be given every third or fourth hour, until the discharges improved in appearance or the tongue began to look red at its tip, or the pulse became more frequent, with a corresponding loss of volume, when the sub. murias was to be withdrawn, and quinine or camphor to be substituted. An infusion of the eupatorium perfoliatum to be drunk every fourth or fifth hour. If the bowels were more than usually constipated, a pill containing—℞. Ext.

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colyc. comps. grs. 30; sub. mur. hydr. grs. 30; pulv. ipecac. grs. 2½; sulp. quinine, grs. 20. Divide into twenty pills. Two to be taken every sixth hour, until bowels are freely moved. This to precede all other remedies. The bowels being regulated, twenty to thirty drops M. tinct. iron morning, noon and night.

These remedies, in conjunction with a Dover's powder at night, and a twenty grain dose of quinine, ammonia, or "brandy toddy," "pro re nata," amount to the sum total of treatment required as internal remedies for this variety. Paint over the surface with M. T. ferri.

### *III.—Vesicular Erysipelas.*

In this variety the patient, apparently in the enjoyment of perfect health, when suddenly his head and face would swell up to an enormous size, rendering it impossible for you to recognize your most intimate friend. In a few hours the tegumentary tissues, blown up as it were into great "blebs," resembling more nearly immense blisters, from the application of cantharis plaster, becoming over-distended, would burst, and a copious discharge of transparent lymph take place, hot and scalding in its properties. As the disease progressed, this discharge became more semi-purulent, and would be more or less commingled with blood and pus. Sometimes, as serious as these cases proved themselves to be for several days, the system would give but slight evidence of much general derangement—not near as much so as in that variety which I have seen fit to denominate "epidemic erysipelas." But when this disease was once fairly established, and the system did begin to sympathize, it was accompanied in its progress by a continued fever of a typhoid type—you had the same tendency to a low, muttering, passive delirium (which commonly supervened between the 3d and 10th day), and the same proclivity of the system to run into collapse. If not an epidemic typhoid erysipelas, it was an epidemic erysipelas, with a strong typhoid tendency; for

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after a few days, in those cases that could not be cut short in their course, the symptoms heretofore enumerated were superseded by a small, rapid, compressible pulse, wavering and vascillating in its character, and by a red, dry, cracked and swollen tongue.

*Treatment.*—In this vesicular variety of the disease, my treatment was somewhat modified. After regulating the bowels, either by a purgative or by a Dover's powder, I would give 3 grs. of sulp. quinine, half grain of ipecac, and 3 grs. nitrate potassa, in the form of a powder, to be taken every four hours, with a Dover's powder at night, and a 20 grain dose of quinine each morning. If bowels were of the colliquative order, which was not unusual, 5 grs. of Dover's powder, to be substituted in the place of the nitrate of potassa in the powder, to be taken every fourth hour. At the same time 30 to 40 drops muriatic tincture iron morning, noon and night. The topical application to be made twice a day upon any parts where the skin was unbroken. Where the surface of the skin was abraded, the nitrate of silver, 60 grs. to the ounce, to be substituted for the muriatic tincture. Any accumulations of pus to have a free exit by the application of the knife, and the sinuosities to be touched by the solid nitrate of silver, and the parts affected to be continually enveloped in oil silk—camphor, ipecac. milk punch and brandy toddy, proving themselves valuable auxiliaries, and only second to large doses of quinine and the iron as internal remedies in this epidemic. Nor must I fail to name the great benefit I derived by the judicious administration of the pulvis Doveri—a sudorific tisane taken at regular intervals to accompany the above medication, until there was an imperative demand for the most decided stimulants.

### *IV.—Phlegmonous Erysipelas.*

This variety most commonly made its appearance in the shape of a small pustule upon the foot, nose and other parts of the body. Its first appearance was as a pustule. Ulce-



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ration having commenced, it bore a striking resemblance to a chancre. Its base gave evidence of induration. From this pustule an erysipelatous inflammation would spring up, and quickly invade the whole surrounding part; and if not, by energetic treatment, stayed in its rapid course, it would spread over the whole body, invading the very citadel of life itself. This form of the disease manifested a strong inclination to dip down into the deep seated areolar tissues, and at times would attack the muscles themselves. Mole-like, it would burrow down in its course through all the membranes of the human body, leaving, as monuments of its progress, large sinuosities filled with a watery, acrid discharge tinged with blood. This discharge of nonlaudable pus was extremely corrosive in quality. Wherever it came in contact with sound parts, it reacted upon them with great corrosive power and destruction. Until this variety had made considerable destructive progress, the general system would give little or no evidence of serious disease; and when it did, the symptoms were of a most decided typhoid type. As a valuable topical application in this variety, candor compels me to accord to the argent. nitras the front rank, possessing powers of neutralization superior to the iron. The iron being more of an antidote, should be applied early, before the system has become too thoroughly impregnated with the poison, and before the absorbents have become too seriously diseased, and may have lost the power of absorption. I am of opinion that the nitrate owes its chief virtue to this power of neutralizing corrosive secretions.

*Treatment.*—The accumulations of pus of whatever grade to have an early and free exit by a free use of the bistoury, and the sinuosities and indurated bases to be freely cauterized by the solid nitrate of silver as often as occasion may require. The sound parts of the tegumentary tissues to be painted over with M. tinct. iron as heretofore. The internal medication was comprised in the administration of fifteen to twenty grains of quinine every six hours; a teaspoonful of M. tinct. iron morning, noon and night. In addition, am-

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monia, porter, brandy toddy, milk punch, et cetera, were freely allowed, selecting the one or the other of this class of remedies as they seemed most likely to build up and support the system of the particular case under treatment. The pulvis Doveri, and in some cases large doses of the gum opii were particularly beneficial.

In these cases, not generally seen until the system had become strongly impregnated and prostrated by the specific poison, you could not hope, by administering its antidote, to be able to overtake and neutralize the effects of the poison—but you should rather endeavor and expect by supporting the system until nature could have time to husband and rally her forces in one grand effort to throw off disease. The suppurative secretions being corrosive in their character, thus it is that the nitras argent. having powerful neutralizing properties as a local application in this form of the disease, is vastly superior in its effects to all other remedies. The same may be said of large doses of sulph. quinine as an internal remedy.

### *V.—Latent Erysipelas.*

In this variety, most commonly, the only thing complained of was a pain in the knee or hip joint, more frequently in the hip joint—at first with slight disturbance to the general system. Ask the patient if his hip is swollen? He will tell you it is. Examine for yourself, and you will discover nothing abnormal about the hip, save some slight excess in temperature. I found these cases much slower and more stubborn than I was led to anticipate—nor was convalescence apt to be established until the eruption made its appearance. The first case of this variety I examined I was sure was a case of subacute rheumatism of the hip joint, until the pulse increasing in frequency, with a corresponding loss of volume, I deemed it advisable to put in a 20 grain dose of quinine, when the eruption doffed its incog. If the eruption in this variety did not show itself in a few

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days and convalescence be established, it was sure to be accompanied by a continued fever of an adynamic type. In this event the treatment did not differ materially from that adopted in the epidemic variety.

### *VI.—Neuralgic Erysipelas.*

Sometimes in this variety the attack would so nearly simulate neuralgia of the portia dura, or the nerves of other parts of the system, that for a few days it was difficult to prognosticate whether erysipelas would develop itself or not; and in some few cases the patient would convalesce, under the administration of quinine or iron, without affording any signs of an eruption. To give some idea of another species of this neuralgic variety, I will record a single case.

Was called to see Mr. L*** a gentleman of fine constitution, of sanguine temperament, with slight tendency to obesity. Found him suffering excruciating pain from two old roots of teeth. Around these decayed teeth the gums were greatly swollen. The antrum appeared filled with pus; bowels constipated; pulse nervous, from loss of sleep.

*Treatment.*—Scarified the gums, prescribed 10 grs. blue mass, to be followed by dose Epsom salts in eight hours; 10 grs. pulvis Doveri at bed time, and a dose of Seidlitz powders next morning. Advised him to see a dentist as soon as possible and have the roots extracted. About ten days from this time, and after the roots had been extracted, he called to see me at my office, very much alarmed about his face. At this time his bowels were regular, pulse very slow, small and weak; skin cool, and over the malar bone a large protuberance, hot, red and tender, with an erysipelatous blush.

*Treatment.*—Cut down upon the bone with a scalpel, and inserted a stick of the solid nitras argenti. Apply to the parts twice a day a saturated solution of the same. Take 5 grains sulph. quinine morning, noon and night, along with 5 good stiff brandy toddies, within the twenty-four hours.

He improved steadily, and I rather suspect (after a few days) under the latter part of my internal prescription.

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The whole number of cases seen by me during the prevalence of this epidemic, was 158. Of these, 33 were of the cutaneous, 37 of the bilious or epidemic, 19 of the vesicular, 24 of the phlegmonous, 13 of the latent, and 12 of the neuralgic form. Average duration in cutaneous 5 days, epidemic 14 days, vesicular 17 days, phlegmonous 27 days, latent 18 days, neuralgic 10 days; in cutaneous form 1 death, epidemic 2 deaths, vesicular 0, phlegmonous 2, latent 1, neuralgic 0. The death in the cutaneous form was a child five years of age, which I visited until I supposed it to be out of all danger. Some two weeks after, I was called to see it again, and discovered that ulceration was going on in the nares and posterior fauces. Applied, as well as I could, to the parts a solution nit. argenti, 30 grains to the ounce, and tonic remedies internally.

The next day I was called in a hurry to see this child, and on my arrival found it dead. A post-mortem revealed extensive ulcerations of the nares and posterior fauces, with œdema of the glottis. This latter affection I believe was the immediate cause of its death.

One of the deaths occurring in the epidemic form of the disease, was a hearty, strong negro woman, aged 35. She had been confined eight days before, and was attended by a negro midwife, who, as far as known, was free from the contamination of erysipelas. I arrived only in time to see her die.

This case evidently terminated in puerperal peritonitis, and I have no doubt (although contraindicated by the typhoid diathesis), as the serous membranes were involved in the disease, she would have been benefited by an early and free abstraction of blood.

The other fatal case was that of a strong, hearty, athletic young man, æt. 26, whom I considered convalescent by the eighth day. He imprudently turned out on the 10th day, took cold, and relapsed. The disease recurring, seized upon his throat, tonsils and subjacent parts, with great violence, and he literally "choked to death" in eleven hours from his relapse.

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The two fatal cases, set down under the head of phlegmonous erysipelas, do not properly belong under that head, being cases of gangrene, somewhat modified by the influence of the prevailing epidemic. They were cases of gangrene, when, from a derangement in the circulation, the vitality of the parts became impaired, and sphacelation was the consequence. The first was that of a gentleman æt. 65, of powerful muscular developements, and of immensely long frame, who had possibly (although rarely been intoxicated) drunk more *good* as well as *bad* whisky than any other man in the commonwealth of Virginia. I had visited him in consultation five years before, when laboring under a severe attack of hypertrophy of the heart, after his case had been almost entirely abandoned by his attending physicians. By giving him a powder composed of digitalis, calomel and squills, I afforded him much relief, and he was soon on his feet again. He had therefore sent for me this time (a distance of 25 miles), after his physicians had given him up to die, with a request that I would come and amputate his foot. After examining into his condition, I positively refused to perform amputation of the foot. I found him propped up in bed, being unable to lie down, and in a semiconscious state. At each diastole of the heart the contractions were so powerful that his whole body as well as the bed would be violently jerked about by them. His breathing was much hurried and stertorous, and his skin over the whole surface of his body as well as eyes were deeply tinged with jaundice. His physicians were administering egg-nog and quinine. His foot had a large bulla filled with lymph upon it. The foot was abnormally cold to the touch; and upon pricking the thin cuticle above this lymph, it would run out, and was also disagreeably cold to the hand. Beneath this the cutis vera was dark, and decomposition was evidently progressing. In several situations, pus of some description or other was located.

After candidly telling his physicians that I believed no plan of treatment held out any chance of relief, and that I believed he must die, and that very soon, from the heart dis-

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ease, I agreed if they would cup him over the pericardial region, and then apply a large cantharis plaster—giving him along with his accustomed stimulus a small powder, composed of digitalis, calomel and squills—I would then cut down through these accumulations of pus, carrying my incisions through the periosteum of the bone, and stick in the solid nitrate of silver. The pus resembled a mixture of poor, thin soup, water and blood. He died thirty-six hours after I saw him.

The other was a lady, æt. 57. I attended her seven years ago, during a protracted attack of hemiplegia, from which she only partially recovered. The cause of paralysis in this case was, I believe, from Bright's disease. The inflammation proceeded from paring a corn on the little toe, and on the opposite side from the one that had formerly suffered from paralysis. The corn had taken on a dark, gangrenous appearance. The temperature of the limb was considerably below the normal standard. She has been taking patent nostrums. Her pulse nearly natural; bowels open; urine unhealthy in appearance, and passed in large quantities; tongue clean, but red and dry, with elongated papillæ. Complains of great pain in the foot; is very restless; no appetite, and is unable to sleep. The inflammation extends from the corn upon the little toe around to the sole of the foot, which is much swollen. This was her condition when first seen on the 18th of January. Prescribed silv. caustic to the corn, and M. T. iron to the foot; to take 3 grs. sulph. quinine every 4 hours, with a pulvis Doveri at bed time.

19th.—Swelling has receded from the sole of the foot; corn still gangrenous in appearance; top of the foot covered with a large watery blister; pricked the cuticle, and the transparent lymph exudes, and is cold to the touch. The cutis vera beneath, for the space that could be covered by two silver dollars, is soft, dark and disorganized. Made an incision with a bistoury through this gangrenous mass, and through the periosteum down to the bone, and inserted a stick of nitrate of silver. The whole foot to be painted over

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with a saturated solution of the same, and to be kept moist by frequent applications of the cold linn poultices, moistened with a decoction of eupatorium. Continue quinine with dose of morphine at night.

20th.—Parts perfectly dry; no suppuration; the foot has a dry, cheesy feel and look; is considerably shrunken; has a very offensive odor. Apply charcoal poultices until the offensive odor is corrected.

21st.—No improvement nor signs of suppuration.

22d.—No change for the better. Discontinue the use of argenti. nitras, and pour in the incisions a strong solution of the tincture iodine; paint the body over with the same every four hours, and reapply the cold linn poultices. General treatment to be continued.

24th.—The foot has much improved in appearance; suppuration is making its appearance; appetite is improving; sleeps more, and is more quiet. Continue the treatment, and in addition, allow a glass of porter or brandy, and roast beef or mutton, "ad libitum."

26th.—Still improving; appetite good; sleeps well; gangrenous parts sloughing off; surrounding parts look well, with healthy granulations springing up, pus becoming laudable; more warmth about the limb; her spirits are becoming cheerful.

28th.—Small blister has made its appearance above the ancle, yet she is apparently doing well.

30th.—The wounds are suppurating well, and discharging healthy matter.

Feb. 2d.—Appears comfortable, and doing well, although an inflamed streak, starting from the blister, and following the course of the common tibial nerve, the posterior popliteal, inferior pudendal, and its branches, has made its appearance. The great ischiatic is swollen, and painful to the touch. The general treatment to be continued. The inflamed nerves to be well rubbed with a liniment composed of two parts of oil origanum, and one part of chloroform, pro re nata.

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5th.—Is doing well; the inflamed streaks have subsided, and good pus is being discharged from all the incisions; sleeps, eats and drinks well; tongue moist, and has lost its red appearance; considers herself much better.

10th.—Was called to see her in haste; found another attack of paralysis had taken place; found her bathed in perspiration; respiration hurried; is unable to swallow; is evidently sinking. Died on the 11th instant. No post-mortem allowed.

The remaining fatal case, and of the variety nominally termed *latent*, was a stout young negro woman, aged 17. Saw her on the 5th day of April, complaining only of a severe pain in the knee and hip joint of the left side. Hip not swollen, but considerably hotter than the other hip. Says she feels well, except the pain in hip and knee; bowels constipated; urine red, and scanty; tongue covered with a thick brown fur; pulse 90, full and strong. Her mistress says she has taken cold, by putting on damp clothes during her menstrual flow.

*Prescription.*—Venesection, 16 ozs.; take a pill, composed of aloes, soda and calomel, every six hours, until she has free bilious discharges—to be followed, 24 hours after they are discontinued, by a tablespoonful of castor oil. The leg to be well rubbed with a liniment composed of one part of chloroform, spts. ammonia one part, and oil origanum two parts, with a hip bath at night. If not improved by treatment, to advise me of the fact. Heard nothing from this patient until the 12th. Mistress supposes she took fresh cold the day before; still complains of her hip; bowels constipated again; tenderness upon pressure over the epigastrium and uterine region; pulse 100, full and bounding. Venesection 12 ounces; cups to the uterine region, followed by warm emollient applications; episp. to pit of stomach. Continue liniment to the hip; aloetic pill until constipation is removed; then morphine at night, if not disposed to sleep.

14th.—Has slept none; bowels acted on twice freely;



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complains all night of her hip; pulse 115, and wiry; skin hot and dry; tongue covered in the middle with white fur, becoming red around the tip and edges.

*Prescription.*—Cups to hip, followed by epispastic; warm application to the bowels, and to take 15 drops spirits turpentine every four hours, with 10 grains pulv. Doveri. Cont. minute dose of sub. mur. hydr. at bed time.

16th.—About the same. Some increase in the redness of the tongue; pulse 120; increase the spts. turpentine to 20 drops every three hours.

19th.—An eruption of an erysipelatous character has made its appearance, extending from the hip up to the umbilicus, and involving the glands of the groin; pulse 120, weak, vascillating and very compressible.

*Prescription.*—M. tinct. iron to the eruption, with 20 grs. sulp. quinine every six hours, along with teaspoonful of m. tinct. iron morning, noon and night.

20th.—Is no better; tympanitis of the bowels; bathed in perspiration; respiration hurried; pulse 130, not perceptible upon the slightest pressure. She died on the 21st.

I was exceedingly anxious to make a post-mortem examination in this case, but was refused the privilege of doing so. The parts most seriously implicated, towards the close of this case, I am satisfied were those parts, when taking on inflammation, we term metro-peritonitis.

*Local remedies.*—The tincture iodine has never proved itself a very efficient remedy with me as a local application in any of the forms of erysipelas. In gangrene, especially in the dry form, it is superior to either the iron or nitrate silver. The muriatic tincture of iron, I feel persuaded, both as an internal and topical remedy, acts more as an antidote than as a therapeutic agent in all the forms of erysipelas. Consequently, to gain its full benefit, it should be given and applied early, before the absorbents have become powerless in transporting the remedy into the circulation, and before the system has become too thoroughly saturated with and prostrated by the specific poison. It possesses no power of

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supporting the system by stimulation, and thereby counteracting the depressing influence of the poison, but simply acts as a neutralizer thereto. Given early and applied early, it is an invaluable medicine in all forms of erysipelas. The endermic method possesses advantages over its internal administration; and were I restricted to its use in a single form, I should most certainly give the local application the preference. According to my theory, it gives back to the circulation just what it has been deprived of by the action of the specific poison. The nitrate silver, when indicated, stands unrivaled in its remedial powers. Possessing in an eminent degree the wonderful power of neutralizing and rendering innocuous all corrosive and acrid secretions, it is plainly called for in this disease whenever and wherever suppuration and decay is progressing, also in all ulcers which have induration for their base, these indurations serving as birth places for corrosive secretions. I saw in one case remarkable improvement (having nothing else with me) by recommending the inunction of old bacon, as recommended for scarlet fever. I have found little or no benefit from the application of the other local remedies so much lauded in erysipelas. I think most cases, so far as the local treatment is concerned, can be well managed by the iron and nitrate silver. The iron to be used early, before abrasion of the skin or suppuration has taken place—the nitrate afterwards. If any moisture is required, to be applied in the form of the linn bark scraped finely and moistened with a cold decoction of boneset. Warm poultices and greasy liniments generally are injurious. This cold linn poultice is a cooling and very soothing application to inflamed parts, where the inflammation runs high. As such, I consider it superior to ether acetas or diacetas plumbi. In erysipelas, to exclude the air, the oil silk will also be found useful, and grateful to the feelings of the patient. The cranberry poultice enjoys a high popular reputation. Of its virtues I am not prepared to speak.

*Internal remedies.*—As I have before said, if the case is seen

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early, before the disease has begun to master the vis medicatrix naturæ, the muriatic tinct. iron, or iron in some form or other, is *the* remedy. When the system begins to sink under its prostrating effects, then I am constrained to believe that no remedy is to be compared to the sulph. quinine in efficiency, as its exhibition enables the system to bear up until it has the power to throw off disease. But to be particularly serviceable, it must be prescribed in doses from 15 to 30 grains. Any one who shudders at the idea, or is afraid to give a 30 grain dose of quinine, knows nothing of its virtues as a remedial agent, and should not prescribe it at all. The stomach often will be calmed and composed by a 20 to 30 grain dose, when it will instantly reject a dose of two or three grains.

I was highly instructed and somewhat amused a few years since, by a controversy, very ably conducted, carried on through the columns of the "Stethoscope"—some of the disputants contending that quinine in large doses was a powerful sedative, and in small doses (one to three grains) a stimulant. The others contending, with a like show of plausibility, that it was a stimulant, in doses of every size. To my plain unvarnished way of thinking, this was a chameleon case; for it is both a sedative, a tonic, and a stimulant, depending entirely upon the peculiar state of the system when exhibited. To prove this position, let me run, or otherwise fatigue myself, until every muscle and nerve in my system has become relaxed. I am unable to hold myself still; I am trembling from head to foot; my breathing becomes hurried; my pulse very rapid; and in this condition, would be wholly unable even to doze, much less to sleep. Every one agrees in designating brandy as a stimulant, or contra-sedative. Now, give me, whilst in this excited state, a stiff glass of brandy and water, and let us see what effect it has upon me. In a few moments my breathing becomes easier and freer, my muscles and nerves become tranquil, my pulse more full and less frequent, and I can lie down and go to sleep. This could not be called with propriety a stimulating effect. Has

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not this well known stimulant rather had the effect of a sedative upon me? A large dose of quinine would have had the same effect.

Again—Let me be laboring under congestion of the brain, and give me 20 grains of quinine (your sedative), or the glass of brandy (every body's stimulant), and tell me who would expect to see me quieted, or my nerves tranquilized by the administration of either remedy? I confess that I should not—but should rather calculate to see the congestion increased, and a fierce, wild delirium be the consequence of the exhibition of either remedy. And I should furthermore expect to see the result the same, from the exhibition of either the known stimulant or the supposed sedative. I therefore reasonably infer that either quinine or brandy, in its action, is entirely subservient to the peculiar state of the system when taken. If the circulation is below par, then quinine or brandy, or any other remedy that by its action restores the equilibrium to the circulation, will cause sedation, and must be denominated sedative in their effects. When the circulation is above par, administer your sedative quinine, or your stimulant brandy, and the consequence will be an increase in force and frequency of the circulation, and which must be termed stimulation, not sedation. From this you will see that I believe that quinine and brandy are either tonic, stimulant and sedative, all owing to the demand the system has for the one or the other. It certainly possesses the remarkable power of promoting ptyalism. This power I have seen manifested by the quinine frequently, and usually when I am prescribing it in small and often repeated doses.

*Clorate potassa.*—This remedy will be found serviceable during the period of convalescence, and especially in those patients who have been accustomed to the habitual use of alcoholic liquors.

*Blood letting.*—In some epidemics of erysipelas, and in a different locality, I have no doubt venesection performed early might prove itself an invaluable remedy. This region,

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with the exception of its proneness to produce typhoid diseases, being unquestionably as healthy as any other portion of the earth's surface, one unmindful of the fact that typhoid fever owes its origin to mountainous and otherwise healthy portions of the county, might be astonished at the inadmissibility of venesection in this disease. The fact is, however, for the last ten or tweve years, diseases in this Piedmont region have borne venesection very badly, whether of a dynamic or adynamic type. In my opinion, it is an unsafe remedy in this locality, and at this time, only admissible in erysipelas, when the serous membranes have become involved. Tartar emetic, by some considered as the very sheet anchor of all judicious treatment for erysipelas, stands in the same category along with blood letting. I have long since (no matter what the type of the disease) learned by experience to substitute in its place the pulvis ipecac. in all diseases occurring in this locality. Prescribed in the most minute dose (however guarded by sedatives or stimulants), it rarely fails to produce frequent, watery discharges from the bowels. For the last ten years I have almost entirely discarded it from the class of internal remedies, rarely ever prescribing it except in cases of tedious midwifery, where the uterine contractions are irregular, and the vagina is found to be hot and dry. Preceded by venesection, it is often invaluable in such cases, proving itself in my hands superior to all the preparations of ergot. Very few cases of this kind will resist its steady administration, carried ad nauseam, or to its emetic effect, without producing a speedy and happy termination to these protracted cases of labor. I am aware that some authors teach us that our treatment of disease by blood letting, tartar emetic, &c. or by large doses of quinine, iron, opium, &c. amounts to the same thing—that as a physiological act the lowering of stimulus in the system implies a positive increase of force in "nerve centres"—and they term this the "stimulus of imperfection." This possibly is so—yet it seems to me to be a very *nicely* drawn point, and sounds much like Col. Benton's definition

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of "masterly inactivity." I hope I will not be understood as recommending any remedy as a specific in erysipelas. I do not believe that any one remedy is an absolute specific for any disease, under all circumstances. I have seen cases of the itch that could not be cured by the application of sulphur; cases of clap that resisted the administration of copaiba, yet rarely yielding to other remedies. I am also fully sensible of the fact, that whilst I may be engaged in judiciously treating erysipelas with large doses of iron, quinine, opium, &c. another physician, in another epidemic, or the same epidemic, in a different locality, may, with equal judiciousness, be engaged in treating it by blood letting, tartarized antimony, &c.—so "mysterious and wonderful is (what we term for the want of a better name) the epidemic influence."

The idea I intended to convey in this paper only amounts to this—that I had now seen two epidemics of erysipelas, in different years, and in very different localities; and in both, the iron, quinine, nitrate silver and opium, proved to be the most efficacious remedies. From this fact, I feel a greater confidence in recommending them to the attention of the medical profession, believing they will be valuable remedies in other hands than mine.

[To be continued.]

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ART. III—*Urticaria, resulting from the use of Hyoscyamus.* By ALBERT J. TERRELL, M. D., Henrico County, Va.

I WAS called July 21st, 1857, to see an infant of Mr. Wm. B * * * of Henrico, about eighteen months old. I saw it about 9 o'clock, A. M.; found it suffering from the effects of dentition; gums swelled, slight fever, frequent passages, and quite restless. I incised its gums, and prescribed the following powders—℞ Hydrarg. chlorid. mit. grs. vi; creta ppt. grs. xxxvi; ext. hyoscyam. grs. iii; M. et. ft. in pulv. No. xii. One to be given every three hours.

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About five or six hours after my first visit I was again summoned to see this child on account of an eruption which had made its appearance soon after the first powder was given. The parents were very much disturbed, supposing their child had scarlet fever, which was at the time prevailing in Richmond.

The eruption resembled that of scarlet fever very much, especially about the face, which was intensely red, of a shining appearance, and slightly swelled. It was distributed over the body in large patches, with interstices of paler redness. It also extended over the legs and arms, but of less intensity. The child was inclined to sleep, from which it could be aroused, but would soon fall to sleep again. There had been no action from the bowels since morning; without fever, pulse natural in every respect. Only two of the powders had been given.

I remained several hours, during which time the eruption as well as the stupor disappeared, without any interference, except cold water to the head, leaving the child in a better condition than it was in the forenoon.

I left a few powders for the diarrhœa, should it return. I did not see the case again, as there was no need for further treatment.

It occurred to me that this state of things was the effect of the hyoscyamus, and that I had some where seen a similar case reported.

I find in the Am. Jour. of Med. Sciences for October 1851, a case of *severe Urticaria from Hyoscyamus*, reported by Dr. Cabot, in an adult. In his case there was greater tumefaction and "stiffness of the tongue and lips." There may have been some paralysis of the tongue in this child, as it did not suck, nor could it be provoked to cry during the continuation of the eruption. This, however, may have been owing to the degree of narcotism under which it was laboring.

It is stated in books on materia medica and therapeutics, that hyoscyamus sometimes acts upon the skin. Dr. Wood, in his Dispensatory, says it occasionally acts as a diaphoretic

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and diuretic, and even produces a pustular eruption. He also enumerates "petechiæ" as one of the effects of an overdose. Eberle, in his Therapeutics, states, upon the authority of Alibert, that "a gangrenous eruption on the skin, particularly of the lower extremities, is sometimes a consequence of a very large dose of this substance."

It is well known that certain articles of food, in some persons, will produce urticaria, and that medicines are occasionally followed by unexpected phenomena; but whether the eruption in this case was a *post hoc* or a *propter hoc*, I will not undertake to decide, though I am inclined to believe it was the effect of the hyoscyamus, owing to some idiosyncrasy.

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ART. IV.—*Report of a Case of Death produced by Swallowing Bones.* By THOMAS POLLARD, M. D.

ON the 18th of October last, by request of my friend Dr. Parker, I assisted him in an autopsy of Harriet, a slave, aged 17 years, who had died the day previous with rather equivocal symptoms. Before stating the result of this examination, I give notes of the case prepared by Dr. Parker.

Sept. 24.—Saw Harriet for the first time. Complains of pain in the bowels; slight fever. ℞ Blue mass and opium.

Sept. 25.—Better. ℞ Castor oil; pulv. Dov. at bed time.

Sept. 26.—Patient up, and says she is much better, though weak. Ordered attention to diet, and left, with request to be informed if convalescence did not progress.

Oct. 12.—Was requested again to visit Harriet. Found her laboring under disordered stomach from having eaten raisins. Ordered mustard plaster to epigastrium, and attention to diet. The raisins had been rejected by emesis.

Oct. 14.—Did not visit the patient until to-day, being prevented by unavoidable circumstances from doing so on the 13th. Found her feeble, with nausea, and constipation, and fever. ℞ Castor oil.



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Oct. 15.—Had rejected the oil. Some distension of the abdomen, but no pain except on severe pressure. ℞ Mustard plasters, castor oil, and enemas.

Oct. 15—5 o'clock P. M.—No better; no action on the bowels, which had not been moved for four days. ℞ Full doses of calomel, with small doses of opium every five hours; warm fomentations to abdomen.

Oct. 16.—No improvement; no action of the bowels; obstinate vomiting, with feeble pulse, and skin rather cool. ℞ Blister to abdomen, and one drop of Croton oil every four hours until bowels moved.

Oct. 16—5 o'clock P. M.—No improvement. Enema ordered, which brought away dark bilious evacuations. Discontinue Croton oil; give milk toddy.

Oct. 17.—Dr. Bolton saw the patient with me to-day. No improvement; pulse very feeble. Continue milk toddy.

Oct. 17—5 o'clock P. M.—Sinking; died during the night.

Oct. 18.—Autopsy, 10 hours after death. Conformation delicate; considerable emaciation. On laying open the alimentary canal, the jejunum and upper half of the ileum were found extensively studded with ulceration, the ulcers being very large, and evidently of considerable duration. In the ileum, below most of the ulcers, were found some dozen or more bones, resembling the bones of the feet of a pig or opossum. These evidently were the cause of the disease and death. They had traveled slowly no doubt along the small intestines, producing inflammation and ulceration; and strange to say, none of them had reached the ileo-cæcal valve. No account could be obtained of the time of swallowing these bones. Stomach much inflamed, though apparently not of very long duration. Peritoneum very extensively inflamed. Lower intestines healthy.

*Remarks.*—It appears strange that death is not more frequently produced by the bones of birds and fishes, which are so frequently swallowed along with food, though possibly this occurrence is more frequent than is imagined, death being attributed to idiopathic inflammation of the bowels,

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or intussusception, or other causes, no post-mortem revealing the true cause.

One other case, somewhat similar to this, has come under the observation of the writer, where death was produced by the bones apparently of a bird, lodging at the ileo-cæcal valve. (The case is recorded in one of the earlier numbers of the Stethoscope.)

An interesting point in the case is the extension of the inflammation from the mucous coat of the bowel to its peritoneal covering, a thing which sometimes, though not often, occurs. Is the process of extension of inflammation by continuity or contiguity of tissue? More probably by the former, the ulcer spreading into the muscular coat and lighting up inflammation here, and thence extending to the peritoneum. Another point to be observed is the absence of pain by pressure in the most extensive peritonitis, and very extensive inflammation of the mucous tissue of the small intestines.

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# SELECTIONS.

*Chemical Final Causes—as illustrated by the presence of Phosphorus, Nitrogen and Iron in the higher Sentient Organisms.* By George Wilson, M. D., F. R. S. E., Regius Professor of Technology in the University of Edinburgh.—From Edinburgh Essays.—(Continued.)

## *III.—Nitrogen in the Human Organism.*

Nitrogen, or as it is otherwise called, azote, which stands at the greatest distance from phosphorus in the group which includes both, is like its analogue, at once very fixed and very variable in properties, but in a way peculiar to itself. Its free or uncombined state is its stable condition. So far as we know, it has no allotropic modifications. In the one shape, that of a permanent elastic fluid, in which it presents itself, it is astonishingly inert. Without taste, odor, or color,

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incombustible at ordinary temperatures, and not supporting combustion, very slightly soluble in all liquids, free from acidity and alkalinity, and not poisonous, it occupies the same neutral or negative place among gases that water does among liquids. It unites directly with no other element at common temperatures, and with but one or two at higher ones. This indifference to direct combination is closely associated with its great elasticity as a gas. It is probably, indeed, the body which presents the best example of gaseity or gaseous elasticity. The only bodies which can compare with it in this respect are oxygen and hydrogen, which, like it have never been liquefied. But oxygen is much more soluble than nitrogen in water and other liquids, and directly unites with many bodies, so as to form solid as well as liquid compounds, from which it is with difficulty set free and reconverted into an elastic fluid.

It does not appear that hydrogen is more soluble in liquids than nitrogen; but it unites directly with many bodies, and forms both liquid and solid compounds which are stable and enduring, so that it is mediately much more liquefiable and solidifiable than nitrogen.

This pre-eminent elasticity as a gas peculiarly qualifies it to serve the animal organism in its performance of the great function of respiration. Indifferent to all other elements, it dilutes oxygen to a point compatible with its effecting the needful slow combustion of the body, which, if undiluted, it would rapidly burn away. Gaseous nitrogen thus goes the round of the circulation, taking no part in the changes to which the blood ministers, and after making the "grand tour" as a seemingly unobservant traveler, returns to the lungs and the atmosphere exactly as it left them.*

But though free nitrogen will scarcely unite with a single other free element, by indirect processes it can be made to unite with nearly all the elements; and the compounds which it forms are among the most remarkable which the chemist knows; acids the most potent, such as nitric acid; alkalies the most powerful, of which ammonia is one among a multi-

* Nitrogen is not of less service to organisms as the chief constituent in weight and bulk of the atmosphere, inasmuch as it diminishes the rapidity of combustion and oxidation at the earth's surface; whilst as a great gaseous envelope which the ocean and tributary waters cannot dissolve and which neither acts injuriously on rocks, plants, or animals, nor is altered in quality by them, it forms a permanent medium for the production of winds, and a moderator and equalizer of the sidereal light, heat and other agencies determining climatic differences, such as no other gas, simple or compound, known to us, could be. But however important such services are to the entire vegetable and animal world, they are rendered outside of the organism, and cannot be added to the list of good qualities which belong to nitrogen as an organismal element.

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tude; dyes the most useful, such as indigo; medicines the most energetic, such as quinine; poisons the most deadly, such as prussic acid and strychnia; besides endless other substances, belonging to every category of chemical compounds.

To the nitrogenous bodies as a class, belongs as a distinctive property the utmost readiness to undergo change, and exactly because they contain an element indifferent to change. Its great gaseous elasticity prevents it from entering into combination, and its great tendency to recover the gaseous form causes it readily to abandon its compounds. As Gmelin expresses it, "Nitrogen has probably the greatest affinity of all ponderable bodies for heat, with which it constantly tends to form a gas. Consequently, many of its compounds are decomposed by slight causes, with extreme suddenness, the nitrogen being disengaged in the gaseous form, and often producing the most violent explosions."*

One mode in which the characteristic longing of nitrogen for freedom displays itself, is as Gmelin implies, by conferring explosiveness on its compounds. I need only name gun-powder; the various bodies of which gun-cotton is the type; percussion cap powder and other fulminates; the so-called ammoniuret of gold; and the chloride and iodide of nitrogen.

In a greatly lessened degree, this chemical fragility and instability are conferred by nitrogen upon the compounds which it forms within living organisms. The immensely greater and more numerous chemical changes which characterize animals than plants, are essentially connected with the much greater abundance of nitrogen in the former. The difference between the slightly alterable, slowly combustible vegetable cotton, a compound of carbon, hydrogen and oxygen, and the spontaneously decomposable, explosive gun-cotton, which differs from it in quality of ingredients by the addition of nitrogen, is typical of the distinction between the enduring, non-nitrogenous, vegetable compounds, and the spontaneously changeable nitrogenous animal compounds; although in this particular case the increase of oxygen in the gun-cotton, exaggerates the instability to the point of explosiveness.

The fibrin, albumen, casein and gelatine which form the largest part of the muscles, the brain, the nerves, and the soft portion of the bones, as well as of the non-aqueous part of blood, milk, and the other animal fluids, contain much

* Handbook of Chemistry. Cav. Soc. Trans. vol. ii, p. 373.

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nitrogen, and in the revolution of the circulation this gas is unceasingly availing itself of its power to become free, to change those bodies in a multitude of ways. At all the glands, nitrogenous compounds are present, taking active part in those mysterious processes by which the blood is filtered, transmuted, recreated, and vitalized into bodies unlike itself. During the germination of seeds we can trace the beginning of the process as a cycle of chemical changes, to the action of oxygen on nitrogenous substances which begin at once to change, and soon involve all the non-nitrogenous compounds in change also. During the fermentation and putrefaction of vegetable and animal substances, we find in like manner the alteration beginning with a nitrogenous compound, which, though present in minute quantity, commences an intestine disturbance destined to proceed till every thing is altered. Leaven is one of the nitrogenous bodies, and it is sacredly proverbial that a little leaven leavens the whole lump. The curdling of milk by rennet is a similar phenomenon; so also is digestion in its first stage (which we can imitate artificially) as it occurs in the stomach. The morbific matters which develop diseases such as small-pox, are, so far as our limited knowledge goes, nitrogenous compounds, and we have reason to believe that their action in propagating disease, resembles that of the azotized body diastese (a modification of albumen) in the germination of seeds, and of the albuminous yeast in fermenting sugar. The healthy phenomena of secretion seem to be in many respects similar in character; a readily changeable nitrogenous compound in the process of change, fermenting, as it were, the blood into milk, tears, saliva, or the like.

It is not to be denied that we are quite unable to explain why the fact of a nitrogenous body, undergoing decomposition in the neighborhood of another and it may be non-nitrogenous body, should cause that other to decompose, although it gives nothing to it and takes nothing from it: why for example, sugar, a compound of carbon, hydrogen and oxygen, should change into alcohol and carbonic acid, because vegetable albumen or yeast is changing side by side with it, into substances totally different. But we know that the sugar if alone would not change, and that the albumen though alone would change, and that when both are placed together the change always begins with the albumen. Hence whatever obscurities remain, we are certain of the great changeableness of the nitrogen compounds, and of their power to involve other compounds in great changes also. It is thus

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that the mobility of nitrogen makes it pre-eminently the modifier of the living organism. Like a half reclaimed gipsy from the wilds, it is ever seeking to be free again, and not content with its own freedom, is ever tempting others, not of gipsy blood, to escape from thraldom. Like a bird of strong beak and broad wing, whose proper place is the sky, it opens the door of its aviary, and rouses and flutters the other and more peaceful birds, till they fly with it, although they soon part company.

Of all the elements it is at first the least attractive to the chemist; but in the end no one rivets his attention more. His early indifference to it is a tribute to its stability; his lasting esteem for it is a tribute to its mobility. Its two-fold character is the measure of its organismal importance.

[To be continued.]

# CHRONICLE OF MEDICAL SCIENCE.

## ANATOMY AND PHYSIOLOGY.

1. *On the Nerves of the Heart.* By Robert Lee, M. D.

Dr. Robert Lee of London, who long ago acquired a high reputation by the demonstration of the nerves of the uterus, has recently followed in a still more brilliant discovery. He has succeeded in demonstrating a great quantity of nervous filaments and ganglia presiding over the movements of the heart. He has shown these to be present at all periods of life, and in all the mammalia he has as yet examined, and it increases in size in certain diseased conditions in which the muscular substance is hypertrophied and the motions of the heart strengthened. The paper, which is published in the Medical Times and Gazette for September 12th, 1857, is illustrated by two wood cuts, one of the heart of a child, the other of a portion of that of a heifer. From these it would appear that the cardiac or aortic plexus, long since described by Fallopius, gives off numerous branches, which ramify in all directions over the surface of the heart, swell-

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ing here and there in ganglionic enlargements, especially where they cross blood vessels. These nerves are all soft, flat and somewhat semitransparent, of a gray color, and invested as to their smaller branches with a neurilemma.

The author states that the chief difficulty in the demonstration of these nerves, arises not from their softness nor the amount of fat in which they are imbedded, but from the presence of a dense fibrous tissue closely investing the heart and sending out prolongations along the vessels and nerves, as well as the fasciculi of muscular fibre. This tissue, which he describes as lying directly under the pericardium, he calls the cardiac fascia.—*Am. Jour. of Dental Science.*

2. *Circulation in the Capillaries.* By Austin Flint, M. D.

Dr. Austin Flint publishes a paper on this subject, in the July number of the American Journal of Medical Sciences. Our space will not permit to transcribe the whole article, or to follow him through his very interesting experiments. We must, therefore, content us with a brief statement of the conclusions at which he has arrived.

After passing in review the various theories of the circulation, and condemning Dr. Draper's notion of the predominance of mere capillary attraction, as utterly untenable, and Harvey's theory as too exclusive, he recounts the experiments which have led him to his conclusion. The result of his enquiries is that there is a distinct capillary action, depending chiefly upon the vital attraction between the circulating liquid and the adjacent tissues, arising from the processes of nutrition. He admits that the vis a tergo of the heart has a great deal to do with the capillary circulation, and does not deny the suction power of the veins, but lays the greatest stress upon the attraction just mentioned, which he calls the capillary power.

The necessary conditions of the healthy performance of the capillary circulation are:

"First, a healthy condition of the vital particles, which is produced by healthy nutrition. Secondly, a particular condition of the blood, which is produced by respiration."

With regard to the latter condition he remarks:

"When the process of respiration or æration of the blood is checked, the blood cannot circulate. This we know to be the fact, but we demonstrate that, in asphyxia, the impediment to the circulation takes place in the capillaries; that the condition of oxygenation is necessary to the performance

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of the vital functions, and it may be that the entire want of the 'capillary power' throws all the onus on the heart, and that the heart is insufficient for the labor. In one of my experiments, after the capillary circulation had entirely ceased, the chest was opened, and the heart found beating regularly."—*Ib.*

3. *Perineuron, a New Element in Nerves.* By C. Robin, M. D.

Dr. C. Robin has recently described a new tissue altogether distinct from the neurilemma investing nervous matter. Its characters are:

1. Its situation around the primitive bundles of nerve tubes and sometimes around the tubes themselves.
2. Its tubular form and its ramifications accompanying the ramifications of the nerves.
3. Its chemical reactions with various tests.
4. A thin, transparent wall, finely granulated, often presenting longitudinal striæ and nuclei, more numerous in the small tubes than in the large.

The perineuron is to the nerve tubes what the sarcolemma is to the muscular fibres, the immediate investment of the proper nerve tissue. It is found in all the nerves of animal life, including the vagus, in all their length from the ganglia for the sensitive nerves, and for those which do not pass through ganglia, from the cerebro-spinal axis. The three nerves of special sense are the only exceptions to this, they not having the perineuron. In the sympathetic nerve, this envelope exists only where there are white bundles or ramifications, and not among the gray or gelatiniform bundles.

In large nerves, the tubes of the perineuron are large (two to five-tenths of a millimetre); in ramifications they become smaller, containing then only two or three nerve tubes, and sometimes only one. The capillaries do not go inside these tubes.—*Ib.*

4. *On the Functions of the Thyroid Body.* By Dr. P. Martyn.

Dr. Peter Martyn has communicated to the Royal society some very ingenious speculations as to the use of this remarkable body. He first calls attention to the necessity of rigidity in all round instruments. This is accomplished, he thinks, by the thyroid gland, which, being pressed upon by



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the muscles, during the act of speaking, becomes gorged with blood, and presses upon the larynx, rendering it tense. Furthermore, he believes this so-called gland acts as a loader. In musical instruments, loaders are used to render the vibrations slower and longer, and the tone in consequence fuller, louder and deeper. They thus give to the voicing part of a small instrument the power and quality of a large one. The human organ of voice is only three inches long, and yet "has the same power as, and better quality of tone than, the instrument which more nearly approaches it—the French horn—which is 9 feet, or the 'vox humana' pipe of a moderate sized organ, which is from 4 to 8 feet long. This economy of size in the human organ has always been wondered at, but never, that I know, explained." Finally, the author of the paper believes that by the varying shape, bulk, density and pressure of this body, it aids materially in producing the qualities of modulation and expression belonging to the human voice.—*Am. Jour. Med. Science and of Dental Sci.*

5. *The Physiology of the Iris.* By Dr. Budge.

A very interesting review of Professor Budge's work on this subject appears in the October number of the British and Foreign Medico-Chirurgical Review. The author shows the muscular fibres of the iris to be divisible into two distinct muscles, one radiating and acting as a dilator, the other circular, constituting a constrictor, of the pupil. The nerves of the iris are the sympathetic, the oculo-motor and the fifth pair. Of these, the sympathetic, when irritated, causes dilatation of the pupil; the oculo-motor under similar circumstances, induces contraction. Irritation of the optic nerve induces contraction, by reflex action through the corpora quadragemina. Section of the fifth nerve brings about, first contraction, and then dilatation of the pupil, and after that sloughing of the cornea.

The centres of these different nerves have been established by direct experiment. That of the sympathetic, the centrum cilio-spinale inferius, as Budge calls it, is in the spinal marrow between the sixth cervical and the fourth dorsal vertebræ. The centre for contraction is to be found upon the inner surface of the corpora quadrigemina.

*Journal of Medical Science.*

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## MATERIA MEDICA AND PHARMACY.

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*On the Influence of Liquor Potass and other Alkalies on the Therapeutic Properties of Henbane, Belladonna and Stramonium.* By Dr. A. Garrod. (Med. Times & Gazette.)

The author first alluded to the frequent exhibition of henbane with liquor potassæ, and brought forward many proofs that such combinations were often administered. He also stated that the like mixtures were recommended by both medical and surgical authors. Dr. Garrod then proceeded to detail experiments, which demonstrated beyond doubt that the active principle of henbane was destroyed by liquor potassæ and other caustic alkalies; and that such a combination was inert, both when topically applied (as evidenced by the absence of power in causing dilatation of the pupil of the eye), and also when internally administered. Similar observations were next detailed upon the preparations of stramonium and belladonna, and the results were found to be the same. It was, however, shown that the carbonates and bicarbonates of the alkalies were devoid of the property of destroying the activity of the plants. In some of Dr. Garrod's experiments as much as a drachm of the extract of henbane and an ounce and a half of the tincture were administered in combination with potash, without the production of the slightest symptom.

The results arrived at in the communication may be thus summed up:

1. Caustic alkalies, such as exist in liquor potassæ or liquor sodæ, entirely destroy the activity of henbane, preventing its action on the pupil when topically applied, and its influence upon the system when internally administered; and, combined with a proper amount of these alkalies, the largest doses of the preparations of henbane may be given without the production of any symptoms.

2. The same influence is exerted by the fixed caustic alkalies upon belladonna and stramonium.

3. The carbonates and bicarbonates of potash and soda produce no injurious effects upon the preparations of any of the three above named plants.

The deductions naturally to be drawn from these results are:

*a.* That neither liquor potassæ nor any caustic fixed alkali

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should be prescribed with tincture or extract of henbane, as the virtues of the latter drug are thereby completely neutralized.

*b.* That when it is desirable to administer an alkaline remedy with henbane, either a carbonate or bicarbonate should be selected, which would probably be equally efficacious upon the stomach, if such influence be required, and certainly as efficient in altering the condition of the urine, and the mucous membrane of the urinary passages.

*c.* That the same precautions should be observed with regard to belladonna and stramonium, if at any time prescribed in conjunction with alkalies.

During the continuance of the debate elicited by the interesting paper which was read before the London Medico-Chirurgical society, Dr. Garrod remarked that the use of the alkaline solutions, although evidently sufficient to neutralize the poisonous influences of the vegetable narcotics, would not be found valuable, because they had to be employed in such large doses as to become themselves injurious to the stomach, but he could offer an antidote to these poisons, which he knew to be both harmless and efficient. He alluded to *animal charcoal*, which was promptly successful in preventing the evil effects of such agents. He once by mistake took twelve grains of the dried leaf of belladonna, and a patient of his took about a quarter of an ounce of the same narcotic. In both instances, animal charcoal was administered with entire success. He mentioned some experiments of his on this point upon dogs. To one dog he gave a moderate dose of aconite, and to a second he administered forty times as large a quantity. The first dog was let alone and died; the second took animal charcoal in the form of the common bone black, and recovered. As many of our readers are called upon to treat persons who have used stramonium, a drug indigenous to our soil, we would especially call attention to the valuable observations of Dr. Garrod.

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## MEDICAL PATHOLOGY AND THERAPEUTICS.

1. *On the Use of Biniodide of Mercury, in Combination with the Rays of the Sun, for the Cure of Goitre.* By F. J. MOUAT, M. D., F. R. C. S., Inspector of Jails and Dispensaries, Bengal.

In the districts about Motiharee, Segowlee, Bethiah, Bhagoha, and on to Goruckpore—indeed, along the whole line of the Teraie—the goitre is so prevalent, that it can scarcely be an over-estimate to state, that, in many localities, one individual in ten is afflicted with this horrible disorder.

In some cases, the tumor attains a certain size, and passes into a chronic state, without serious inconvenience to the person affected; in others, it increases rapidly, and, at the end of a few years, after becoming an enormous excrescence, terminates in loss of intellect in some cases, and in others in death.

In the cold weather of 1854–55, Captain Cunningham, second in command, 12th irregular cavalry, began to apply the biniodide to the goitre in the following manner:

An ointment was prepared, according to a formula, as follows:

Melt 3 lbs. of lard or mutton suet, strain and clean; when nearly cool, add 9 drachms of biniodide of mercury, taking care to make the powder fine by trituration in a mortar.

Work in the mortar until no grains of red are apparent in the ointment, and put in pots for use, taking care always to keep both powder and ointment from the rays of light.

Use as follows:

About an hour after sunrise, apply the ointment to the goitre with a spatula made of ivory or thin broad smooth bamboo, quantity according to size of tumor; rub it well in for at least ten minutes. Let the patient then sit with his goitre held well up to the sun, and let him remain so as long as he can endure it.

It is probable that, about noon, he will suffer severe pain from the blistering effect of the ointment, although no pustules are raised on the skin. About 2 P. M. the ointment should again be applied with a very careful and tender hand; and the patient should be dispatched to his home, with orders not to touch the ointment on any account with the

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hand, but to allow it to be gradually absorbed, which absorption will be complete on the third day.

This treatment is quite sufficient for an ordinary cure. Should the case be a very bad one, the patient is ordered to return next year, for the removal of what may remain of the tumor. Except in goitres of the very largest size, this is seldom necessary. After the application of the second year, no goitre has been known to continue.

The patients begin to come about the middle of November, and continue to the end of March; after that time, the sun's rays act so violently on the medicine, that it is not advisable to apply it.

The cures effected have been very numerous. On my arrival at Segowlee, I was glad to join Captain Cunningham in this good work; but with him rests all the credit of having established it.

The cases are not now so numerous as they were in 1855. At that time, 500 or 600 were not unfrequently treated in a single day; a small charge of 2 pice for each cure was levied for some time, in order to make the people set more value on it; but as this seemed to check some patients, it was discontinued.

Until lately, no exact account of the numbers treated has been kept; but, since Captain Cunningham commenced, up to the present time, it cannot have been less than 60,000. Many come from a very great distance—Goruckpore, Mozufferpore, Mulaye—but the cases in the vicinity are decidedly less numerous; in fact, the disorder is being extinguished. In no case, except one, have we failed to make a complete cure during the second year.

I am now on the point of departure for England, and I should be glad to think that the medicine might be continued to the people. I would propose that stations for its application should be established at Mozufferpore, at Motiharee, at Segowlee, at Bethiah, at Rutawal or Bhogaha, at Ramnuggur, and at Goruckpore. To each station might be appointed a dresser, on rupees 8 per mensem, to apply the ointment, which should be furnished monthly from a central station. It would be proper to order, that the ointment be always applied in presence of the dresser. If given to be carried off, it will be sold. Nothing else on the subject strikes me at present; but cases have occurred when the patient rubbed off the medicine, when the smart became severe, and therefore the patients should be kept until sunset, after the stuff has been rubbed on. Any cooly can be taught to do it; all my servants apply it, and some of the

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troopers. A tender hand, and gentle use of the spatula, after softening the ointment by working up, is all that is needed.

Enclosed is the list of the cases treated since the commencement of the present year by me. Captain Cunningham has treated many hundred cases in addition to these, and, as I write, patients are pouring into the compound.

Setting humanity aside, I think that, in a financial point of view, it would pay government to get these poor people cured, for each life or each sound man must be worth at least one rupee per annum to the revenue.

It appears to me, that the rays of the sun, either by some chemical action on the ointment, or by causing its more rapid absorption, have much to do with the cures effected; but I am about to make the experiment, of treating one man by night before a large fire, and comparing the case with one of a similar size and standing, treated in the usual way.

By this means, I hope to ascertain how much of the cure depends on the action of the sun's rays, whether as regards chemical properties or the absorbents of the skin.

*Indian Annals of Medical Science.—Ed. Med. Journal.*

2. *Lactic Acid in the Blood.* By Dr. Richardson.

Dr. Richardson laid before the Medical society of London at their last meeting a heart in the second stage of endocarditis; the subject had been a dog, and the cause of the disease the introduction of lactic acid into the system by the peritoneum. Dr. Richardson explained that after a long enquiry into the effects of the alkalies, he had turned his attention to the influence of the acids, selecting first for experiment the lactic as a feeble acid, and as an acid to which unusual importance had been attached, from the fact that Dr. Prout had first spoken of it as the probable materies morbi of acute rheumatism. The author having failed in introducing the acid into the systems of animals by the mouth in such a way as to excite any specific symptoms, and having equally failed in injecting it into veins owing to the immediate effects, he introduced it into the peritoneal cavity. Here the acid was quickly absorbed, and in such a way as to produce the pathological results he now exhibited. The heart presented showed acute valvular disease of both sides. One segment of the tricuspid, swollen several times beyond its usual size, and having a pale red appearance,

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was bound by recent adhesion firmly down to the cardiac wall. The mitral was swollen and vascular, and around the upper margin it was studded with fibrinous beads. The animal had been subjected to the acid on three occasions, 75 grains of the acid with 4 grains of water having been thrown in each time at intervals of two days. Twenty-four hours after the first injection the heart was embarrassed and the first sound obscure. Forty-eight hours after the second injection a well-marked systolic bruit came on, and continued till death. Death had been prematurely hastened in this case. By an accident in the last injection the bowel had been slightly torn by the injecting needle, and the intestinal contents had flowed into the peritoneal sac. Dr. Richardson, in commenting on this case, showed drawings in which endocarditis thus produced was present in the first stage, and in the stage of recovery. He did not, he said, hastily rush to the conclusion that his experiments, seven of which were briefly referred to, proved to demonstration that lactic acid was the true cause of rheumatic endocarditis, but they certainly proved thus far, that lactic acid was sufficient to produce such endocardial condition. In the heart placed before the society it would be observed that both sides were affected, which was uncommon in simple rheumatic endocarditis. This arose from the fact, that in the experiment the acid had to traverse with the venous blood the right side of the heart before it reached the left—hence, both sides were affected. The cause of the immunity of the right side of the heart in simple rheumatism, he (Dr. Richardson) explained by two propositions: 1. That the action of the poison was local, i. e. it exerted a direct action on the endocardial surface. 2. That in ordinary rheumatism the poison was a product of respiration. Thus the poison being formed in the course of the pulmonic circuit was carried over the left endocardial surface; and being distributed through the body was either thrown off in the excretions, or if returned by the veins, returned so modified or neutralized as to exert no injurious influence on the right endocardial membrane. The instrument used by the author for injection was laid before the society. It is very simple, viz: a thin, finely pointed hollow needle, attached to a small india rubber injecting pump. The needle being carefully thrust through the abdominal wall, but directed a little upwards so as to avoid the intestine, the solution of the acid warmed to 96 degrees is gradually thrown in and the needle is withdrawn. To hasten absorption, the animal is kept without food or drink a few hours previous to the operation.

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3. *Catheterism of the Larynx in Croup, etc.* By M. LOISEAU.

M. Loiseau some time ago presented to the Académie de Médecine some new instruments for the catheterism of the larynx, and a short time since he had an opportunity of showing the usefulness of the principal of these instruments, which is a laryngeal tube. A little girl, four years old, attacked with croup, was admitted at the Hôtel Dieu; M. Blondeau, the chef de clinique, resolved to make use of M. Loiseau's instrument. He introduced his fore finger into the mouth, and, having reached the epiglottis, kept it up, so that it became easy to pass the tube in the larynx. The introduction of the tube in the cavity of this organ was known at once to have taken place, by the sound indicating the passage of air in the tube. An injection of a saturated solution of sulphate of copper was then made, and the tube immediately withdrawn. The child seemed to suffer only when the finger lifted up the epiglottis, and gave no sign of pain when the tube was introduced, and the injection made. The next day the child was better. Three times more the catheterism and the injection were employed by Prof. Trousseau, and after each time the child became better, and three days after the last, the child was well, though there was still a slight hoarseness. We will let this case tell its own tale, and add only that there cannot have been any mistake in the diagnosis.—*New York Jour. of Medicine.*

4. *Treatment of Malignant Pustule.* By M. RAPHAEL.

M. Raphael, a learned physician of Provins, a pupil of Nélaton, has astonished the Académie de Médecine by announcing that he had cured four patients attacked with this carbuncular affection, by merely applying the leaves of the walnut tree on the pustule. Many doubts have been expressed concerning the possibility of such cures, and it has been asserted that M. Raphael must made have some mistake of diagnosis. A physician of the south of France, where this affection is frequent, had already treated with success forty patients, by the application of walnut leaves. It is difficult to admit that errors of diagnosis have so often been made. Two able physicians, Messrs. Salmon and Mannoury, have nevertheless tried to prove that very frequently ordinary carbuncular affections are mistaken for malignant pustules, and they assert that the only means often of deciding the nature



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of the disease, is to inoculate the pus in animals, and ascertain if it be contagious or not. Besides, they relate a case in which the application of walnut leaves has been followed by death.

5. *Naphtha Oil against Favus.*

M. Chapelle asserts that this substance cures favus very quickly. He first has the head shaved, and applies a poultice upon it, so as to render the pustules as free as possible from all the coagulated or desiccated matters. He then applies a thin layer of naphtha on the whole surface of the head. This application must be made twice a day, and the head must be washed with soap and water before each. All the purulent vesicles found must be opened, and the pus expelled. When there is pain on application of the naphtha oil, another and not exciting oil must be mixed with it.

6. *Treatment of Dysentery.*

Prof. Piorry read a report on a paper of M. Hamon on this subject, at the Académie de Médecine. M. Hamon has seen two epidemics of dysentery, and has employed with the greatest success the sulphate of alumina and potassa in injections. In children the dose must be from one to four grammes (20 to 80 grains), and four to eight grammes in adults. In one place thirty-five patients treated by this means have been cured; in another place, out of forty patients, two old men only have died. We remember that a physician in the French army, Dr. Barthez, has obtained great advantage of this mode of treatment in Algeria, where dysentery is very violent.

7. *Bronzed Skin and Diseases of the Supra-renal Capsules.*

Our friend, M. Charcot, brought some time ago to the Société de Biologie, the supra renal capsules of an old man, who died, after having suffered all the symptoms described by Dr. T. Addison. In merely examining the capsules with the naked eye, they did not seem to be altered, but the microscope showed that their usual elements had in a great measure disappeared, and been replaced by fat; and the reactions offered by various tests, and particularly iodine, with

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the normal tissue of these glands, did not exist with the tissue of those presented by M. Charcot. This is an important fact, as it renders entirely null all those cases of bronzed skins, in which the capsules not examined with the microscope, have been declared healthy.

8. *Epilepsy; Successful Treatment.*

There are three cases in which epilepsy or epileptiform convulsions have been cured. In one of these cases, which is very interesting, and shows clearly the power of an irritation upon sensitive nerves, to produce epileptiform convulsions, there were larvæ of some insects in the frontal sinuses of a young girl, who was completely cured after having long been sick, as soon as the larvæ had been killed by the smoke of segars containing arseniate of soda. This curious case, sent to the Académie des Sciences, has been published *in extenso*, by M. Legrand du Saulle, in the Gazette des Hôpitaux.

The second case we have to mention is not less interesting. A man had been wounded in the head at Sebastopol; a part of the skin and of the external table of the frontal bone had been taken away by a ball. Six months after, the patient had attacks of vertigo, and the next day real fits of epilepsy; the wound had not cicatrized. Trepanation was performed, and a piece of broken bone which irritated the dura mater was extirpated. Since the operation there has been no more fits, and the patient now, ten months since he has been trepanned, is quite well. We have tried to show, concerning cases of this kind, that it is not the pressure on the brain, but a peculiar kind of irritation starting from the centripetal nerves of either the skin or the dura mater, which causes epilepsy, by a reflux action on the blood vessels of the encephalon. We will refer to our work on epilepsy for explanations on this subject, pointing out particularly our remarks upon an important case that we owe to the kindness of Prof. Van Buren.

Of the third case, we will say merely, that it is a case of abscess of the skin of the head, which had produced epileptiform convulsions, and that the convulsions were cured when the inflammation of the skin was cured. Bouchut is the physician who treated the case.

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9. *Preservation of Vaccine Matter.*

In France this matter is sent to every physician who asks for it, by a committee of the Academy of medicine. The vaccine is preserved between two glass plates or in capillary glass tubes. M. Depaul, in a report to the academy, remarks that this substance frequently loses its properties when it is placed between glass plates. Mr. Trousseau says that more than four times out of five he has failed in trying to vaccinate when he employed the substance kept between plates. He also asserts that capillary tubes, from which air is secluded, always preserves vaccine matter powerful for years, while if there is air with the matter it putrefies and loses its properties.

10. *Danger of Carbonic Acid used as an Anæsthetic.*

It is well known that lately Prof. Simpson of Edinburgh, and afterward M. Follin of Paris, have reintroduced the practice of using carbonic acid as an anæsthetic. It is particularly in painful affections of the uterus that this substance has been employed. Whatever be its mode of action, which we believe to be at first a temporary stoppage of circulation in consequence of a contraction of the blood vessels and of the agglutination of the blood corpuscles, it truly diminishes pain for a time, but there is danger in employing it for a long while, as M. Charles Bernard has recently shown. The carbonic acid is absorbed, and it produces symptoms of asphyxia, vertigo, headache, nausea, an undefined feeling of pain, and weakness, etc. It is necessary, therefore, not to make use of this gas too long and in too large quantities.

*Brown Séquard's Report of French Medicine.—N. Y. Jour.*

11. *Nature, Causes, Statistics, and Treatment of Erysipelas.*

The Midland Quarterly Journal for May last contains a highly interesting paper on this subject by Peter Hinckes Bird, F. R. C. S. The following are his conclusions:

1. Erysipelas is merely an example on the skin of that diffuse inflammation which, in other tissues, constitutes diffuse inflammation of the mucous membrane, diffuse phlebitis, puerperal fever—all of which have a common origin, a

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poison in the blood, are infectious and contagious, and may mutually produce each other.

2. The term erysipelas should be confined to diffuse inflammation of the skin and subcutaneous cellular tissue.

3. Erysipelas is best treated by stimulants and support, and when complicated with inflammation of the subcutaneous cellular tissue, by early incisions, which should extend to the depth of the disease.—*Amer. Jour. Med. Sciences.*

## 12. *Treatment of Phthisical Vomiting by Local Anæsthesia.*

Mr. Atcherley, disappointed in the effect of the orthodox remedies—as hydrocyanic acid, opium, bismuth, gallic acid, creasote, nitrate of silver, counter irritation, &c. &c.—for this condition, states (Liverpool Medico-Chirurgical Journal, July 1857) that he was induced to try Dr. Arnott's method of producing local anæsthesia in two cases with decided success. He directed "pounded ice and common salt to be mixed together in the proportions used to produce anæsthesia. This poultice was placed in a thin muslin bag and put upon the epigastrium, and retained there until the skin became white and insensible; it was then removed, and its place supplied by lint, dipped in cold water, to prevent too sudden a reaction. As I had always witnessed great benefit from the internal administration of chloroform in previous cases of a similar nature, I directed ten minims to be dissolved in two teaspoonfuls of brandy, with a sufficient quantity of iced water to make a draught, to be taken whenever the feeling of nausea came on. I gradually increase the quantity of chloroform if the smaller doses are insufficient; but I have seldom had occasion to exceed sixteen or eighteen minims. In this case it had not such an extended trial as its valuable sedative powers entitle it to. I have generally found it to allay the sickness for a time, even in the most urgent cases; and when given in the remission of the paroxysms, it relieved the feeling of exhaustion and overwhelming depression consequent on the long continued retching, more speedily than any other restorative. Still, in this patient, no permanent suspension of the vomiting took place until after the application of the ice poultice. No food of any kind was given till a clear truce of four or five days had been established, the strength being maintained by enemata of beef tea, jelly, and wine.

"The effect of this treatment was most remarkable: the stomach, which had rejected every thing in the shape of food

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for the space of ten days, accompanied with violent retching, sometimes for two hours' continuance, became suddenly tranquilized. The vomiting ceased for a whole day and night immediately after the first application of the ice poultice, although it returned to some extent on the following morning, when the same means were employed with the same beneficial results. The patient has since had no return of sickness, is now enjoying a good animal diet, with beer or wine, as inclination dictates, and has been able to resume the use of cod liver oil."

13. *Medical Excerpts.*

*Chronic bronchitis.*—M. Maude, the micrographer, who practices medicine in Paris, proposes to treat chronic bronchitis by the following fumigations, in an apparatus composed of a balloon of glass with two openings, one of which is in communication with an india rubber tube. He places 60 grammes (1½ ounce) of water, and 5 grammes (75 grains) of the following composition: Acetic acid 50 grammes, creasote 5 grammes, water 500 grammes. The liquid is heated, and the patient inhales the vapors. Gradually the strength of the liquid is increased. The varieties of chronic bronchitis which are best treated by fumigations are, the dry catarrh of Laennec, the pleuritic bronchitis, and the chronic bronchitis with a subcrepitant *râle.*

*Coffee and lemon juice in ague.*—M. Von Holsbeek draws attention to a mode of treatment he has found useful. Infuse an ounce of well roasted coffee in three ounces of boiling water, and having strained the fluid, acidulate it with lemon juice. The whole is given at once, five hours before the paroxysm.—*Presse Belge.*

*Iodine in obstinate vomiting of pregnancy.*—As we have already noticed, M. Eulenberg strongly recommends tincture of iodine for obstinate vomiting. Other practitioners have tried it with varying results; but according to the experience of MM. Becquerel and Buisson, the tincture acts most advantageously when combined with iod. of pot. The following is M. Buisson's formula: Tr. iod. ʒi; iod. pot. ʒ1½, aq. dest. ʒxxx. A tablespoonful is placed in a glass of sugared water, and this is to be divided into three doses, to be taken during the day.—*Gaz. Hôp.*

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*Pressure in phlegmasia dolens.*—In relating the case of a young man who had suffered from phlegmasia dolens, and in whom the superficial veins continued much swollen, M. Trousseau cautioned his pupils against applying in similar cases firm bandages. The deep seated veins being obliterated, this enlargement of the superficial ones is a necessary consequence, and compressing them by a firm bandage would completely interrupt the circulation of the limb. A moderate degree of pressure, however, is admissible, as giving support to the walls of the superficial vessels, and preventing their becoming varicose.—*Ib.*

# BIBLIOGRAPHICAL RECORD.

*Materia Medica and Therapeutics, with Ample Illustrations of Practice in all the Departments of Medical Science, &c. &c.* By THOMAS D. MITCHELL, M. D., Professor of Materia Medica and Therapeutics in Jefferson Medical College. A new edition, revised and enlarged. Philadelphia. 1857. J. B. Lippincott & Co. (Received from J. Woodhouse & Co.)

IT is an interesting study to a casual observer, and still more to the public journalist, who has the opportunities for comparison constantly before him, to mark the differences in the mental constitution, the contrasts in the habits of thought, which show themselves so forcibly in the literature of different nations; and to make this remark more immediately applicable to our present purpose, let us for a moment look at the method of teaching and investigating the various branches of medical science pursued by the three leading nations of the west, Great Britain, France and the United States. As we design to devote our pages at present particularly to the science of materia medica and therapeutics, we will confine our comparison to that branch of study.

A French work on the materia medica will strike the

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reader at once with the wonderful ingenuity displayed, the amount of ingenious research, of patient analysis, of scientific application, which has been lavishly spent in its preparation. There is a theory to start from, and the experiments are beautifully adapted to elucidate this theory. In this, the most uncertain portion of the medical art, the writer will strive to reduce his investigations and test his statements with all the rigor of a mathematical demonstration. He reasons closely and logically. His deductions are plausible and forcible, and the only thing found at the close of his labors, is the *uselessness* of the whole result. Disease rages just as virulently, and the doctor has gained no stronger weapon to be used in the contest.

What a contrast to this is the English method of research. Instead of disregarding all authority, every thing succumbs to the venerated axioms of the ancient worthies. The conservatism of the people shows itself in its reverence for old views and opinions, old prescriptions and combinations, old medical Latin and barbarous nomenclatures. The Frenchman talks of his drugs in modern French, but the Englishman, after the manner of the *fathers* of the art. New medicines are ignored or refused. Physic must be nauseous. It always has been so, and it must remain as their forerunners left it.

The American takes up the same subject—as for instance in the work before us. He cares no more for authority than his Gallic confrere; but he has the honest dislike to theory, characteristic of John Bull. His only question is, "What is the use of it?" What will it cure? Is it of any value in the sick room? His whole object is the cui bono. There is no theory; there are no experiments on dogs, Guinea-pigs or bull-frogs; there is no Latin or Greek; no classification of remedies; no accounting for the whys or the wherefores. He begins at Abies Excelsa, and he stops at Zingiber, and in regular alphabetical order, he tells you to what use you can put each remedy of the Dispensatory. Authority is nothing—theory is nothing. *Experience* is every thing.

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Professor Mitchell, in this enlarged and improved edition of his Treatise on the Materia Medica, does no violence to our sketch of the American method of book making; and indeed we regard it as a very favorable specimen of "native literature." What is the use of classifying remedies? says our author. Why speak of hæmatics, catalytics, neurotics and eliminatives? We don't know how or why these things act. Let's begin at A, and take them as they come, and tell all we know about each member of the long list before us.

Again—it is always the custom of the European author to premise his description of each drug with a learned disquisition as to its botanical and chemical characteristics; what sort of stamen or pistils; how its leaf is shaped, and where the root best loves to grow; who discovered it; what is its history. All this is waste print and paper with our true republican. He truly remarks, not one in a thousand reads all this. We will save our pages for *practical* objects, and teach you what to do with your physic when you have a patient to attend.

We do not intend to declare our adherence to the *American method* of writing, by these remarks, but we certainly regard such productions as having a value peculiarly their own in the prosecution of medical study. In a science like that of medicine, the student is liable to lose himself in the labyrinths of theory, authority and technicalities which surround him, and it is a good thing for him to have the cobwebs cleared away by the strong hand of the independent, although it may be empirical, practitioner. A glimpse of clear sky gives him renewed hopes, and he pushes on with more zeal in his search after the truth.

Dr. Mitchell's book, although thus eminently "practical," is not wanting in evidences of an enlarged observation and a careful comparison of the opinions and writings of others who have occupied the same field. We know of no work which "posts us up better with the contemporaneous literature of the subject; and the author has evidently collated



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the periodical literature of the day in order to fill his repertory to repletion. We fear he has carried this practice too far, especially in a work designed for the student principally. He gives him too many uses for the same article, and runs the risk of leading the unpracticed experimenter into many errors. While this may be regarded as a fault in a work designed as a text book, it gives to it a value in the eyes of the old practitioner, who desires to know the experience of his brethren in other countries, while he is prepared, from his own observation, to detect the true from the false, and to estimate every new proposition according to its real merit.

In conclusion, we will remark that the author deserves credit for his plain and simple style of composition, which, although it sometimes wants dignity, never lacks force and directness of purpose. Some of the anecdotes are plainly aimed at the student, and sound in our ears like the old jokes of the lecture room; but very frequently, on the other hand, the application of a remedy is happily exemplified by the introduction of a case in which it had been successfully employed; and the author, in these passages of his book, proves himself to be a sound practitioner, and one who has passed through his professional career with an observing eye and a thoughtful and unprejudiced mind.

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2. *The Principles and Practice of Obstetrics, &c. &c.* By Henry Miller, M. D. Professor of Obstetric Medicine in the Medical Department of the Louisville University. Philadelphia. 1858. Published by Blanchard and Lea. (Received from A. Morris.)

We have examined with some care the volume before us, which, although it is declared by its author to be the second edition of a treatise published by him several years since, is to us, at least, a new book; and we are justified in pronouncing it a most respectable and valuable addition to our

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home medical literature, and one reflecting credit alike on the author and the institution to which he is attached.

It is not to be expected that in the art of obstetrics much of novelty can now be introduced—the most profitable and popular branch of the medical art, that portion of the science which is the most capable of being reduced to precision and accuracy. The press teems with essays, treatises and lectures on the phenomena of pregnancy and parturition, and the labors of the most eminent of the European obstetricians are in the hands of every physician.

Under these circumstances, we regard the work of Dr. Miller as deserving of especial credit. Holding a position in a western school, where less than a century ago the wild Indian hunted the buffalo, and the face of the white man was unknown—it is a gratifying evidence of our national progress to find indigenous authors, who, as in such a production as this, prove themselves capable of contributing a valuable addition to the literature of medicine, and a work eminently clear, well arranged, and accurate.

Nor is the author fearful of any aberration from the standard axioms, and the well trodden rounds of the olden authorities in obstetrics. With modesty, but in a frank and honest spirit, he discusses various points in practice generally accepted by the authors on this subject; gives his reasons for dissenting from their opinions; and urges his own views and experience forcibly and well. One of the most prominent of these points in practice is upon the propriety of turning the child on the occurrence of flooding, whether accidental or from the presentation of the placenta. We will also notice his chapter on the causes and treatment of abortion, as original and instructive.

The great merit of this treatise consists, however, in the careful manner in which the author has collected every thing valuable from the contemporaneous works of his brethren who have written on the subject. To the celebrated Dubois he acknowledges his obligations for the concise and accurate description of the anatomy of the pelvis

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and organs of generation; Montgomery, in his noble work on pregnancy; Tyler Smith, in his investigations into the various diseases incident to the vagina; and Bennet and the cauterizers, are all made use of in an effective and practical way. Simpson's bold suggestions on the attitude and position of the fœtus are well applied; and the Edinburgh professor, in his ardent advocacy of *anæsthesia in labor*, is strongly supported by Dr. Miller, who declares that he has for nearly ten years used these agents in the lying-in-chamber without accident, and with the most satisfactory results.

In the chapter on Abortion, Dr. Miller adopts the opinions of Bennet of London, and believes that in a large proportion of cases this accident is due to the existence of chronic and ulcerative inflammations of the os and cervix uteri, requiring for their cure, leeching, scarifying, and in the ulcerative form, the application of caustics, generally in the form of nitrate of silver. A warm friend of "the antiphlogistic influence of the nitrate crayon," the author controverts the views of Professor Meigs, who maintains the danger resulting from the long continued use of the lunar caustic, when applied too deeply or with too much frequency. Dr. Miller contends that even when from an accidental fracture of the nitrate pencil, portions of the solid stick have remained in the cervical cavity, he has never seen any ill effects resulting; he however believes that an error has been committed, in the use of this remedy too frequently, and he therefore prefers to apply it boldly but at considerable intervals. In these views we are indisposed entirely to agree. Employed with judgment and caution, the caustic practice is of undoubted value, and will not unfrequently result in much unequivocal success, but we dissent from the broad assertions of Dr. Miller in favor of its employment generally, and particularly in the case of abortion. We would prefer, as a general rule, the more patient and cautious preventive treatment, by quiet, the recumbent posture, and abstinence from sexual excesses which will generally accomplish the end in view.

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The student will find in this work a most useful guide to his studies; the country practitioner, rusty in his reading, can obtain from its pages a fair resumé of the modern literature of the science; and we hope to see this American production generally consulted by the profession.

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# EDITORIAL AND MISCELLANEOUS.

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## *Ambrose Paré.*

THE plate which appears in our present issue is intended to revive the memory of an ancient worthy, whose great merits have been too much overlooked by the British school of writers,* but who, from his originality, learning and potent influence upon the science during the sixteenth century, well deserves the proud title of the "Father of French Surgery." The lithograph is copied from the bronze statue designed by David d'Angers, and erected in his native city, in honor of AMBROSE PARE.

The dark clouds of the middle ages were already beginning to break away when Paré was born. The great events of the fifteenth century; the revival of letters; the art of printing; the reformation and the discovery of America had effectually stirred from its very foundations the stagnant world. In the midst of this general uprising of the nations, this universal revival of the arts and sciences, medicine and surgery were not found without their representatives. VESALIUS of Padua turned once more to nature in search of her secrets, and by his dissections of the human body, restored anatomy to its place amongst the sciences, whilst Paré, with his bold conceptions and his entire disregard of the

* It is a singular fact, that the name of Ambrose Paré is not to be found in the elaborate pages of the Encyclopedia Britannica.

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prejudices and superstition of his age, rescued surgery from the hands of the barbers, and elevated it to that position which it now holds as one of the noblest of man's achievements.

To show the immense impetus which surgery received from the labors of Ambrose Paré, we will briefly compare its condition when he first entered its ranks with its advances during his life. The youth who at the age of sixteen years came up to Paris, was apprenticed to a barber surgeon, Guy de Chauliac, who, as some historians say, was the instructor of our hero, for the early days of this great man are shrouded in obscurity. He rises at the first cock crow, sweeps out his master's shop, washes the basins and opens the windows, with the purpose of earning his good will by attracting an early customer. He next goes around to the various houses whose occupants are waiting for his services, and his time until after two o'clock is engaged in waiting in their antechambers, or in curling their perukes, oiling their long locks, or putting them in papers, preparatory to the evening toilette. Towards the night, he takes his book to study, but is constantly interrupted by the ringing of the little bell at the door, announcing a new beard to be shaved, or another shock to be combed. In short, so exacting were the "preceptors" of that day, of their unlucky apprentices, that the teachers of medicine and surgery would give their lectures at four o'clock in the morning, so that they might be enabled to prosecute their studies before "business hours."

The young barber surgeon having struggled through the term of his apprenticeship, against all the obstacles thrown in his way, at length offers for his examination, and receives the following degree from the hands of his learned board of "medical examiners:"

"We hereby certify, that by virtue of a certain order given by the chamber of police, dated the 16th day of
and signed we have proceeded to the examination of the above named candidate as to the amount of his experience in the condition and cure of bruises, burns, felons and

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carbuncles; the various methods of blood letting, and the remedies necessary to be employed in the cure of these diseases, and from the answers of the above named, we are satisfied that he is sufficiently informed to cure the above named burns, bruises, felons and carbuncles; all of which we testify to be true. As witness our sign manual this day of in the year one thousand five hundred and forty-five."

This is a specimen of the surgeon's diploma three hundred years ago—this the evidence of scholarship with which Ambrose Paré entered upon his professional career.

It is plain, however, even from the very imperfect account we have of the characteristics of Paré's mind, that he must have been always an original thinker and of a practical common sense order of intellect; and to these qualities we owe the many improvements he introduced into the practice of surgery during his long life. Entering the military staff of the French army during the wars of Francis the First with the Emperor Charles the Fifth, he soon discarded the ridiculous and barbarous customs of his cotemporaries. It is said that in the commencement of his career, after a skirmish, Paré neglected or forgot to pour the boiling oil into the wounds of the combatants, after the custom of the time. He waked up in the night and remembered his dereliction of duty, and earnestly prayed that no ill consequences might result, but the next day, to his surprise, he found that the wounds which he had let alone were doing much better than those he had treated. From that time he changed his practice, and *trusted to nature.* His success was so great, that in a few years he rose to the highest position, and eventually became the surgeon in chief to three French kings, and achieved for himself a world wide reputation.

This brilliant innovation was soon followed by another, more startling to the prejudiced surgeons of his day, and vastly more valuable in its results. In the first case, Paré exposed the folly of applying boiling oil to the surfaces of recent wounds; but in the second, he also denied the propriety of using the actual cautery in amputations, then uni-

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versally the practice; and to him modern surgery owes the *practice of tying blood vessels after operations.* These two advances, made by a barber apprentice, transformed military surgery from an atrocious torture to a beneficent and conservative art.

Time and space will not permit us to dilate upon the many brilliant feats performed by Ambrose Paré, some of which are of historical interest. He stood by the death bed of his first royal patron, Henry II, who was killed by a thrust from a lance in the tilt yard; and he boldly dragged the pike which had transfixed the brain of the Great Guise, whose miraculous recovery after such a terrible accident, added fresh laurels to the fortunate operator. Although a Huguenot by birth and opinion,* he always retained the entire confidence of that bigoted Catholic Catherine de Medicis, and her three sons, whom he faithfully served during their short and unfortunate reigns. His enemies attempted to supplant him in the queen's favor, by charging him with the sudden death of Francis II, whose reign only lasted about eighteen months; but Catherine emphatically denied that her "good Paré" could have been guilty of such a deed.

In 1572, the horrible massacre of St. Bartholomews occurred, but the king, who calmly laid his plans for this wholesale murder, yet claimed the life of his Huguenot surgeon. He sent for Paré, and told him he must become a Catholic, but the brave surgeon replied, "Sire, you promised never to ask me to do four things: To enter again into my mother's womb; to be present on the day of battle; to leave your service, or to go to mass." Charles kept him near him during the bloody events of the three days, for, said he, when the priests cried, "Slay him, slay him," "He has saved many lives, his own shall be preserved."

Thus, with increasing honors, we see our true hearted barber surgeon pass through his long career, for he reached

* Malgaigne labors to show that Paré was not a professing Huguenot, although of heretic parentage, but we are justified in the assertion, on the authority of the Duke of Sully, and Brantome, his cotemporaries.

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the advanced age of eighty years, preserving to the last his hopeful trust in God, his independence of opinion and doctrine, and his world wide charity. "Je t'ai pansé, Dieu te guerisse," was the prayer of his heart, and it was to this faith in the powers of nature, that surgery owes so much. Guided by it, Paré was led to trust to the restorative efforts of the system, and thus abandoned the superstitious customs of his cotemporaries. Let those who daily profit by his wisdom and experience, ever hold in honored recollection old Ambrose Paré, the father of Hippocratic surgery.

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## *Popular Medical Books.*

The *fifteenth* edition of Dunglison's Medical Dictionary has just appeared from the press of Blanchard & Lea of Philadelphia, containing nearly 6,000 new terms applicable to the science of medicine, and rendering it the most complete authority on the subject to be found in any language.

Professor Bedford's practical work on the Diseases of Women and Children, published by S. S. & W. Wood of New York, deserves particular notice, having reached a fifth edition in the short space of two years. The contemptuous enquiry can no longer be made, "Who reads an American book?"

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## *Parasites of Man.*

Dr. David F. Weinland, favorably known among us by his zoological contributions to the American association for the advancement of science, has issued proposals for a complete treatise on the parasites of man, in a zoological and medical point of view. The work will be published by subscription, in four quarto parts, each comprising eighty pages



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of text, and two or three plates. The first two parts will treat of helminthology; the third, of the parasitic insects; the fourth, of the parasitic plants, that grow on man. The price of each part will be $2 to $3, according to its expense. The plates will be executed in the finest manner by Mr. Sourel, the artist who lithographed the excellent atlas of professor Agassiz's great work. Dr. Weinland will give many original observations on American Helminths, and describe a new genus of tænia peculiar to the negro. His prospectus is accompanied by very cordial recommendations from Dr. Gould and professor Agassiz, which renders it unnecessary for us to do more than call attention to his useful undertaking.

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## VARIETIES.

### *Medical News and Items.*

THE DUKE AND THE JESTER.—It was a custom in old times, in many sovereign courts, to have a jester or buffoon, who, by his witticisms and jests, and even by his impertinencies, served to amuse and while away the time of the sovereign and his courtiers.

It is said that the Duke of Ferrara, Alphonse d'Este, on one occasion, while in familiar conversation, enquired which of the trades was most numerously followed by his subjects. One said, the shoemakers; another, the tailors; some mentioned the laborers, and others the lawyers.

Gonelle, a famous buffoon, said that there were more doctors than any other class of men, and made a bet with his master the duke (who disputed the fact), that he would prove it in twenty-four hours.

The next morning Gonelle left his room with his night cap on and a handkerchief around his jaws. He placed over these his hat, and fastened his cloak closely about his throat. In this costume he wended his way to the palace of his excellency by the *Rue des Anges.*

The first person he met asked him what was the matter.

He replied, a dreadful toothache.

Ah, my friend, said the other, I know the best remedy in the world against that evil, and he told him.

Gonelle wrote his name on his tablets, pretending to write down his recipe.

At the next step he met two or three at once, who made the enquiry, and each one offered him a remedy. He wrote down their names also, and so pursuing his

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walk, he met with no person who did not give him a recipe different each from the other, and all declaring that theirs was well attested, certain and infallible. He wrote down every body's name.

Having arrived at last at the inner court of the palace, he was surrounded by many persons, all of whom knowing him, enquired after his malady, and offered him their remedies, each one declaring his was the best. He thanked them, and wrote down their names.

When he entered into the chamber of the duke, his excellency cried out, a long way off, Eh, Gonelle, what ails you?

He replied very piteously and feebly, the most cruel toothache that ever was in the world.

At once his excellency said to him, Eh, Gonelle, I know a thing which will instantly stop your suffering, just as well as if you were to have it pulled out. Brassavolo, my physician, never practiced a better course. Do this and that, and you will be immediately relieved.

Suddenly Gonelle threw off his night cap and bandage, and cried out, You too, sire, are a doctor—just look how many I have met between my house and yours. There are more than two hundred, and I have only walked down one street. I'll bet I could find more than ten thousand if I chose to look for them. Can you show me as many persons in any other occupation?

This is a true story and well told, as every body meddles with physic, and there are few persons who do not think that they know as much, indeed more than the doctors.—*Erreures Populaires par Laurent Joubert.*

THE GOLDEN TOOTH.—If we would always take care to assure ourself of the truth of a statement before disputing over its cause, we would avoid, said Fontenelle, the ridicule of having found a cause for what had no existence.

In 1593 it was noised abroad that a child in Silesia, aged seven years, had shed its teeth, and one of them had been replaced by a tooth of gold. Horstius, professor of medicine in the University of Helmnstad, wrote in 1593 the history of this tooth, and pretended that it was partly natural and partly miraculous, and that it was sent by God to this child to console the Christians, who were then scourged by the Turks!

During the same year, for fear that the golden tooth should be lost to future historians, Rullandus wrote its history.

Two years afterwards Ingolstenus, another savant, attacked the theory of Rullandus with regard to the tooth of gold, and immediately Rullandus returned a brilliant and learned reply.

Another great man named Libavius overthrew all that had been said about the golden tooth, and advanced his own peculiar views.

There was only one thing wanting in all these learned productions, and that was to prove that the tooth was really golden. When, however, a goldsmith examined it, *he* found that there was a bit of gold leaf wrapped around the tooth with great neatness, but the authors unfortunately began their books before consulting the goldsmith.—*Revue Therap. Med. Chir.*

LONDON PHYSICIANS.—It is stated by a recent medical writer that there are in the city of London twenty medical men of reputation, whose incomes range from $26,000 to $100,000 a year. The average incomes of ordinary practitioners are stated to be from $4,000 to $15,000 per annum.

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ANECDOTE OF RICORD.—A friend told me a day or two ago a good anecdote of Philip Ricord, the distinguished surgeon of the Hospital du Midi. Ricord was sitting in one of the orchestra stalls at the grand opera—it is not often he gets time to go there—and all at once when the house was still, and in the midst of one of the songs of a principal barytone, he commenced cheering in the most approved style. Every body looked at Ricord, but did not understand. As the singer grew warm and commenced gesticulating with vehemence, Ricord's enthusiasm augmented, and other gentlemen at his side, feeling the infection, followed his example and applauded also. Ricord, turning around briskly, wanted to know what they were applauding for? "To tell you the truth, sir," was the reply, "it was partly from your example."—"But you don't know why I applauded?" replied Ricord. "I was applauding the marvelous effects of the iodide of potassium!" The singer was one of Ricord's patients, who had a stiff elbow joint, for which he had been taking for some time this remedy, and it was when Ricord saw the arm unbend itself in the gesticulations of the singer, that he broke out into such enthusiasm. His neighbors remained silent for the rest of the evening."—*N. Y. Daily Times.—Am. Med. Monthly.*

DISCOVERY OF THE TOMB OF HIPPOCRATES.—The Esperance of Athens states, that near the village of Arnaoutli, not far from Pharsalia, a tomb has just been discovered, which has been ascertained to be that of Hippocrates, the great physician, an inscription clearly enunciating the fact. In the tomb a gold ring was found, representing a serpent—the symbol of medical art in antiquity—as well as a small gold chain attached to a thin piece of gold, having the appearance of a band for the head. There was also lying with these articles a bronze bust, supposed to be that of Hippocrates himself. These objects, as well as the stone which bears the inscription, were delivered up to Housin Pasha, governor of Thessaly, who at once forwarded them to Constantinople.

EXTRAORDINARY FECUNDITY.—It is stated in a number of the Magazine of Natural History, &c. of Moscow, that the peasant Kirilow was presented, along with his wife, to the empress. This peasant was married, for the second time, at the age of 70. His first wife was delivered 21 times: four times of 4 infants at a birth; seven times of 3 infants, and ten times of twins—in all 57 children, then alive. The second wife had already been delivered seven times; once of triplets, and six times of twins—in all fifteen living children.

DR. BROWN-SEQUARD.—We learn with pleasure that the Royal society has awarded the queen's prize of five hundred dollars, from the fund appropriated annually for the encouragement of scientific researches, to Dr. Edward Brown-Sequard.

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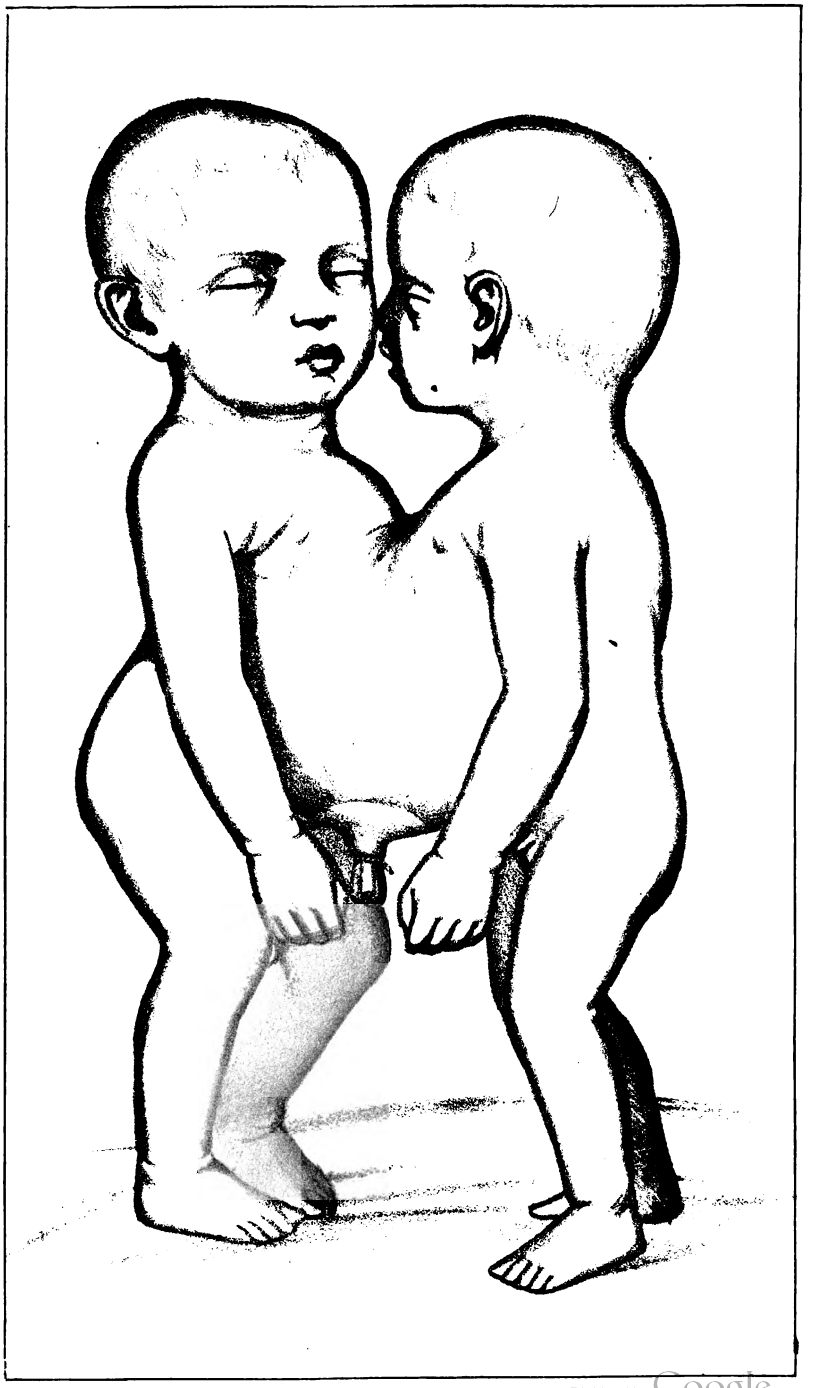

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VIRGINIA

MEDICAL JOURNAL.

MARCH 1858.

ART. I.—*Extracts from the Transactions of the Baltimore Pathological Society.* By W. CHEW VAN BIBBER, M. D. (Continued from vol. ix, p. 138.)

*Croup.*

DR. RIGGIN BUCKLER said, on Friday evening Nov. 6th, we were called to see a little girl aged 20 months, of a delicate and feeble constitution, suffering from an attack of croup. The following is the history of the case:

For the previous ten days she has had repeated attacks of catarrh, for which her parents had dosed her with ipecac., tart. emetic, &c. On the morning of Nov. 6th her cough, which hitherto had been loose and moist, changed its character, and became dry, tight and croupal. We saw her in the evening at 8 o'clock, when she presented the following symptoms: Face flushed; skin hot and dry; pulse rapid and feeble; respiration quick and apparently embarrassed; cough frequent, dry and croupal; voice very hoarse; chest sounds, clear; over both lungs diffused subcrepitant rales; throat of a deep dusky red (but perfectly free from deposit); tongue dry and coated; much restlessness; tosses herself continually about the bed. Has been vomited 4 or 5 times during the day, and had one or two loose stools. Ordered tart. ant.

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$\frac{1}{40}$ gr. every 3 hours; hot foot bath, &c. to be repeated 2 or 3 times during the night.

Saturday Nov. 8, 9 o'clock A. M.—Condition much the same; has slept but little during the night; antimony has nauseated her, and vomited her once; no further action on bowels. Continue antimony; give every 4 hours a powder of ii grs. calomel, $\frac{1}{4}$ gr. ipecac., iii grs. nit. potass.; apply turpentine externally to the throat; diet light.

2 o'clock P. M.—Symptoms aggravated; breathing much embarrassed; has been vomited freely, and the bowels have been opened 3 or 4 times. Examined throat, and for the first time found it completely coated with a soft white caseous deposit, easily detached. Blew into throat ʒi finely powdered alum. Copious vomiting followed, which cleared out the throat completely. A solution of sulph. copper was then freely applied to the fauces. This afforded her much relief, and she fell into a quiet sleep of some hours' duration.

6 o'clock P. M.—Has an increase of fever; bowels are very loose; breathing easier; no alteration in the cough or voice; both dry and hoarse. Again applied copper to the throat, and ordered antimony and the powders to be discontinued. Take of chlorate potass. 10 grs., syr. ipecac. 20 gtts. in a dessertspoonful of infus. senega every 4 hours.

11 o'clock P. M.—It was necessary to use the alum again to relieve the throat of the deposit.

Sunday Nov. 9, 9 A. M.—Has slept part of the night; has less fever, and looks pallid; heat of skin not great; bowels very loose; has had 6 or 8 copious water stools since we last saw her; cough not improved; she seems to be much exhausted; the tonsils have still a deposit upon them. Ordered an astringent mixture for the diarrhœa; continue at longer intervals (5 or 6 hours) the chlor. potass.; milk as diet; wine whey occasionally.

12 o'clock M.—Has had but one stool since we saw her; has taken more nourishment than heretofore; the deposit in the throat has increased; used the alum again, which removed nearly all of it. Continue treatment.

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6 o'clock P. M.—No improvement in croupal symptoms; diarrhœa has been checked. Injected into larynx arg. nit. grs. xx to the ounce. A violent fit of coughing followed, during which a piece of tough, consistent false membrane, about a half inch long and a quarter inch wide, was coughed up. Free vomiting followed, and brought away more of the deposit. This afforded much relief.

11 o'clock P. M.—She fell into a sleep soon after we left, which lasted about two hours. She has a slight increase of fever; and though she seems easier, still there is not the least change in the character of her cough; voice still very hoarse.

Monday Nov. 10, 10 o'clock A. M.—Has had some sleep during the night; her general symptoms are no worse, but the local affection is still the same; there is yet much deposit in the throat. The following course was now pursued. By the aid of several screens a small tent or chamber was constructed. This was covered with blankets, and a comfortable settee for the nurse was arranged within. Into this the child well wrapped up in a blanket, was placed along with the nurse, and by means of an apparatus consisting of a tin boiler, which could be easily and constantly heated by the ordinary fire in the room, and a tin pipe of some 6 feet in length, connected with the boiler, we were enabled to introduce into the above chamber a constant supply of vapor. Continue the chlor. potass. Milk and chicken water for nourishment.

12 o'clock M.—We found the child asleep. Her skin is moist and pleasant; breathing is decidedly better, and has lost much of its harsh, dry sound.

4 o'clock P. M.—Condition much the same as at 12 o'clock; voice is still hoarse, but the respiratory sounds, together with the cough, are more moist.

In the evening, at 11 o'clock, when we made our visit, our little patient was coughing most violently, during which she vomited, and threw off several pieces of soft, greyish false membrane. Her nurse states that shortly after our last

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visit in the afternoon, she noticed that the "dry" breathing and cough of the child had, as she termed it, become very rattly.

The next day, Nov. 11, 10 o'clock A. M. the nurse states that she has slept nearly all the night. Her symptoms are decidedly better in all respects; she seems worn out, and inclined to sleep; cough is less frequent, and perfectly moist and free, more catarrhal than croupy in its character; she has no fever.

From this period, for the three succeeding days, she was kept under the moderate use of the chlor. potassa, and under the little tent, breathing altogether the warm, moist air.

On the 16th of November, she was playing about apparently perfectly well, and up to the present date has had no return of the croup.

We have reported this case in full, Mr. President, and must plead as an excuse for having thus trespassed upon your time, the many points of interest that cases of this kind must necessarily offer. Recoveries from this form of croup are rare occurrences, and any one to have seen how bad a subject our patient was to withstand such an attack, would never have imagined she would have recovered. Her age, delicate constitution, health already impaired by previous sickness and treatment, together with a strong predisposition to struma, were all against a favorable prognosis.

Since the first of this year, this case makes the sixth of the kind we have met with. Three occurred among our patients, one in the practice of Dr. Thos. H. Buckler, one in that of Dr. Bull, and one patient belonging to no particular doctor, but operated on by a physician of this city, and died under the knife. Of the six cases, three were males; three females; three died; three recovered; one of those that died, as already stated, fell a victim to the operation of tracheotomy. (See case reported to society by Dr. F. Donaldson.) Two out of the three that died were boys; both were under two years of age; the girl was over six years. The three that recovered were all under two years

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of age. In every instance the false membranes could be distinctly seen in the fauces. In three of these cases the chlorate potassa was given freely from almost the very commencement of the attack. In two of these "the vapor inhalation" was used, and both recovered. The other occurred in the summer time, and died soon after being attacked.

It may be interesting to you to know that the three cases specially observed by us had been in bad health, and had suffered from catarrhal and gastric affections prior to the attack of croup, and all of them were born of parents essentially strumous. The deposit on the fauces in these cases resembled granular coagulated albumen, and was soft, friable, and unctuous to the touch.

We would especially wish to direct the society's attention to the employment of the "vapor inhalation" as an adjunct in the treatment of these cases. The benefits derived from the inhalation of vapor in the treatment of laryngeal affections in the adult, are well known to medical men. It was recommended also in the treatment of infantile croup many years ago, by Dr. Warren of Boston; but the mode advised for applying it was entirely different. Thus it was suggested to place the patient in a hot bath of water and cover all with a blanket, so as to get the full benefit of the steam. This method, it will be seen at a glance, has many disadvantages. The immersion of our little patients in hot baths tends much to increase their exhaustion. And besides, to the majority of children such a routine of hot bathing would frighten them so much that it is questionable whether they would derive much benefit from the treatment. We have seen the vapor bath applied in two cases, in the manner which we have just described, and which was first suggested to us last winter by Dr. John Buckler. Both of the cases were decidedly benefited by it. Under its influence we have noticed—1st. The temperature of the skin is lowered; the fever is lessened; the skin becomes moist (even when the child is wrapped in a blanket). 2dly. The breathing is easier, and the cough is less frequent, losing its dry and rude character, and becoming moist and loose.

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Dr. Archibald George read the following paper upon the anatomy and diseases of

## *The Prostate Gland.*

Notwithstanding the industry lavished upon the study of this organ by anatomists, many points in relation to it are still obscure, as we may judge from the fact that the number of its lobes is still a vexed question, many writers considering it a unique body, others holding that it consists of several. It is, however, so intimately connected with the neighboring organs as to need a few anatomical considerations before we can approach the main subject of this paper.

The prostate is then, as regards its structure, a gland of the species termed "clustered" or "en grappe," composed of granulations, from each of which is sent off an excretory duct, which unites with those of neighboring granulations, to form troncules and trunks. These open for the most part, upon the inferior surface of the prostatic urethra on either side of the veru montanum. Some terminate upon the sides, or at points more or less near the superior or inferior surface of the urethra, although none have yet been found opening immediately upon the superior wall. The largest of them open upon the posterior part of the channels existing on either side of the veru montanum, directly in front of the internal orifice of the urethra, in a cul de sac, which sometimes offers an impediment to the entrance of a sound into the bladder. In the condition of hypertrophy this cul de sac becomes quite profound, and the orifices of the ducts so enlarged that a fine bougie easily penetrates into the body of the gland. The number of these ducts is from 12 to 15, and when injected with mercury are found to possess an arborescent disposition. Where they terminate they pass under the muscular fibre subjacent to the mucous coat of the urethra, and open obliquely upon the latter. The smallest troncules are lined by pavement epithelium, where a tube is formed of the diameter of $\frac{2}{10}$ of a millimetre. This becomes prismatic or cylindrical, and in

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the larger tubes vibratile cilia are added. In addition to the proper secretory and excretory apparatus, is an accessory tissue, intimately associated with the former, and composed of fibres of cellular tissue disposed in fascettes, and accompanied by finely granular amorphous matter. These fascettes are directed in every direction, but generally run parallel with the ducts. Through this basement structure are distributed a number of nervous filets derived from the hypogastric plexus, a dependence of the great sympathetic. Its arteries come from the inferior vesical, middle hemorrhoid and internal pudic. The gland is surrounded by a proper envelope continuous with the structure just mentioned. Its color is tawny, reddish yellow, and creaks under the scalpel. Amussat and Civiale admit that it is composed of three lobes—two lateral and one middle (inferior of Vidal de Cassis). The latter is termed by Velpeau the pathological lobe, being, according to him, the most common cause of retention of urine. According to Haller and Morgagni, the organ is unique. Sir Everard Home taught the same doctrine as Amussat. Spiegel and Ledran admit but two lobes, while Serres holds that it is composed of no less than four lobes—the two internal uniting at an early age to form one—a central. Whatever be their number, it is quite certain that in the adult their union is so intimate that they cannot be easily separated, if at all—a union further strengthened by the envelope referred to, and by a layer of muscular fibres from the bladder.

*Fond.*—The prostate has generally been likened to a cone flattened vertically and antero-posteriorly, the base resting behind upon the neck of the bladder, and its summit being anterior and under the urethra. This statement or comparison is incorrect; the transverse diameter is greater than the vertical, and the base is not perpendicular to the axis. Roberi describes six faces to the gland, but Sappey seems to admit but two, and gives these dimensions: inferior face, 31 millimetres; superior, 18; width at base, 40; height, 27. The dimensions vary much, however, at different ages.

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Thus, in the child it is quite rudimentary, and in the adult does not acquire a size in proportion to the rest of the generative apparatus. In age hypertrophy is common, indeed seems to be the proper physiological condition of the organ in advanced life.

*Position.*—The prostate is situated in the angle formed by the rectum, where it changes its antero-posterior direction for a vertical one as it plunges towards the anus. The summits of the organ and of the angle exactly correspond. Its relations with the bas fond of the bladder are these—when the latter is empty, and the rectum voided, the base of the prostate is covered by peritoneum. At the urethral orifice of the bladder its mucous coat adheres to the gland—an adherence rendered yet greater by its continuation with the prostatic portion of the urethra. But the muscular tissue of the bladder has the most intimate connections with the prostate, for some of its longitudinal fibres arising from the summit of the bladder, embrace the lateral and superior parts of the gland, and the walls of the first two portions of the urethra adjacent, before being inserted upon the pubis, while others are inserted upon the base of the gland.

*Relations with the urethra.*—The urethra, in passing through the gland, is lodged much nearer the superior than the inferior surface, there being about four-fifths of the organ under the canal. Amussat and some other writers contend that the urethra merely lies in a sort of channel in the top of the gland, but their error is, as Sappey has shown, in confounding the superior portion of the prostatic ring with the sphincter of the neck of the bladder and anterior longitudinal fibres of the mass adhering to it. When the base of the prostate is examined, two canals are seen upon it. The superior and largest is that for the neck of the bladder and urethra, while the inferior corresponds to the neck of the seminal vesicles and the ejaculatory canals. The latter is lined by a fibrous sheath sent from the prostato-perineal aponeurosis. An artery, vein, and two or three lymphatics pass through this orifice. These canals are not very adherent, and may be

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readily followed by mercurial injection. At their point of termination in the urethra they are separated by a portion of urethral mucus, termed the "prostatic utricle," whose size is proportionate to that of the ejaculators. Its anterior extremity communicates with the urethral cavity, by an oval orifice occupying the most prominent portion of the veru montanum. When the ejaculatory ducts are full, this orifice is closed, and when they are emptied the orifice again opens. It hence seems simply to be a provision by means of which an easy dilatation may be effected for the passage of the sperm at the moment of ejaculation. Evidently this anatomical description of the prostate is necessarily imperfect, but my limits compel me to turn to other more practical points in its consideration. The use of the prostate seems to be to give support and solidity to the organs it encircles, bearing some analogy to the iron hoops which the pump maker places upon the joints of his stocks. The neck of the bladder is enabled to sustain its form, and to bear the weight of accumulated urine above it without risk of laceration. In its strong embrace the joining of the urethra and bladder is safely accomplished, and the other organs traversing it securely protected. Its function is the secretion of a fluid destined to lubricate the urethra and to mingle with the semen. It is of a milky aspect, of oily consistency, transparent, and of little tenacity. It is composed of a serum, numerous fatty granulations, gray molecular granulations, cells of prismatic epithelium, with vibratile cilia, and frequently various concretions. To this fluid the semen owes its *whitish color*.

*B. Diseases.*—One of the most interesting topics in connection with this gland is its relation to the disease termed spermatorrhœa. Its role in this affection is most important, and not less so from the fact that it is often overlooked. To the valuable work of Lallemand we owe the first light shown upon a subject then obscure—and I believe that at the present date the principal doctrines advanced by him are placed beyond a doubt—that nocturnal pollutions consequent upon



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excess of venery, masturbation, indulgence of erotic ideas and reading of filthy books, occurring with erection and sensation—which become diminished as the affection advances; that diurnal pollutions primarily dependent on the same causes and secondarily upon slight irritation even; sometimes a lascivious idea, or touching the genitals, with slight orgasm, if erection be impossible—are all points for the elucidation of which we owe much to M. Lallemand and his school. But in regard to true spermatorrhœa, a flow quite passive, of semen during micturition and defecation, without sensation or even consciousness, other than its traces upon the clothes or in the urine, or on the outlet of the urethra—the same unanimity by no means exists. Indeed it is the opinion of many eminent men, among whom is Ricord, that the talented physician of Montpellier has rather injured his cause in that portion of his works which treats of true spermatorrhœa. Lallemand seems indeed to have hurried to his conclusions in an unphilosophical manner, and many of the means of diagnosis given by him are rather extraordinary, as coming from a man of his capacity. The true state of the case seems to be that spermatorrhœa may sometimes occur, but very rarely, and that when during defecation or micturition, traces of its presence are found, it is dependent on the fact that the sperm had remained in the ducts since the last regular pollution, the orgasm not having been sufficiently strong to throw it off. And as the prostate is in this affection the seat of more or less morbid action, its deviations, while compressing and closing the ejaculators, afford the means of retaining the sperm until change of position or efforts shall displace them. At other times, and by far more frequently, the supposed seminal fluid is found to be merely the prostatic product poured out in unusual quantities. The prostate may itself in certain conditions of irritation become a cause of nocturnal pollutions. But the valuable paper read before you by Dr. Frick obviates the necessity of pursuing this theme further.

Tumefaction of the prostate commonly occurs in subjects

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over 45 years of age, and may be partial or general. The latter is, however, comparatively rare, but occasionally is so great as to nearly fill the bladder. But even in these cases the tumefaction is not uniform, and chiefly affects the median portion. Partial tumefaction affects the body or lateral lobes. In the first case there may be a slight prominence shaded off towards the periphery, or a transverse bar, or even a pediculated tumor—that is, a projection whose base is smaller than its summit; or it may assume the opposite conditions. The lateral lobes increase either in a transverse direction or an antero-posterior one. This latter tumefaction, where unconnected with that of the body, does not much alter the urethral canal. Commonly, it simply flattens it in the form of a slit. Tumefaction of a single lobe does not alter the calibre, but changes the direction of the canal. As it increases, however, and becomes more general, the trouble does not cease with deviation, but the neck of the bladder is dragged back, and the membranous portion of the urethra pushed forwards, exerting a deplorable influence upon the bladder, and rendering catheterism difficult.

Dr. Wilkins has recently exhibited to you the proper sounds to be used in these cases, and the manner of introducing them, so it will be unnecessary for me to reiterate them. The glandular substance is commonly found normal, sometimes softened, and the ducts enlarged and engorged; sometimes the mass is tough, with no visible alteration of structure. The results of tumefaction are hypertrophy of bladder and dilatation of the urinary passages. Unaccompanied by inflammation, these are the only serious results. It may be detected by a rectal examination. The ribbon shaped fæces are considered diagnostic of swelled prostate, but it is obvious that the sphincter ani alone impresses a form upon the dejections. Perhaps there is, however, reason in believing that its pressure upon the rectum may produce hemorrhoids or prolapsus of the gut. This sketch of enlarged prostate of course extends to exceptional cases. Ge-

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nerally, it is not so far increased in size as to cause any great amount of disturbance, and may be successfully treated by leeches to the perineum; warm hip baths; frictions with unguent iodine, and the catheter.

*Acute Inflammation* was formerly considered of rare occurrence, but is now admitted to be frequent. According to Ricord, it is consequent upon violent blennorrhagia and bad treatment, and is announced by perineal pain, difficult and scalding micturition, retention of urine, painful defecation, constipation, and pain along the course of the sciatic nerve, together with pain in sitting down or crossing the legs. If there be much swelling or fluctuation, it will be detected by the finger; and in this examination care must be taken not to confound the apparent fluctuation of the gland with that of the vesiculæ seminales. The generative functions are commonly disordered, and nocturnal emissions may occur. The general reaction is seldom great; sometimes there is vomiting and tympanitis. The means of diagnosis between this inflammation and that of the neck of the bladder, consists in the fact that in the latter there is constant desire to pass water, while in the former the frequency of dejection does not appear to be affected. The common termination is of course in abscess, which may, if unpunctured, discharge into the urethra, destroying the ejaculatory ducts, or into the bladder, vesiculæ, the surrounding cellular tissue, rectum, or force their way into the penis and scrotum. Abscesses may be one or more in number. When they discharge into the bladder, we can only detect it by examining the urine, but when they empty into the urethra, pus is generally voided suddenly, or at intervals, in such quantities as to leave no uncertainty. The post-mortem examination shows the follicles filled with pus resembling scrofulous tubercle, the surrounding structure being healthy, or infiltrated with pus or pultaceous matter. The work of disintegration may go on so completely as to leave but a mere shell. As soon as fluctuation is ascertained, the gland should be imme-

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diately punctured. Some discussion has arisen as to the best place for doing this—many writers prefering the urethra—many the perineum. As for myself, I prefer the latter, from the much greater certainty we have in directing our instrument; and on the other hand, from the danger of producing stricture by the formation of a cicatrix in the urethra. The other part of the treatment consists in numerous leeches to the perineum, opiate enemata, and warm bath. We must also guard against retention of urine by the free use of the catheter. But in spite of our precautions, the foundation for chronic inflammation is often laid. This, when severe, presents many of the symptoms above described, which increase in violence after exposure or excess; the urine becomes forked, sometimes mingled with blood; sexual connection is painful; constipation obstinate, and great difficulty in introducing the catheter. The progress of chronic inflammation is slow, but by no means less sure on that account, with a constant tendency to complication of neighboring parts—to ulceration of the prostate; to inflammation of the bladder, and to urinary fever. At the same time the effect upon the morâle is deplorable—melancholy and indifference are common, and finally the subject is carried off by exhaustion. The prognosis is of course unfavorable. The treatment consists of care, rest, diet, opiate clysters, hip baths and leeches. So long as the retention of urine is but slight, the catheter must be avoided. When the necessity arrives we are to meet it with firm measures. If we cannot insinuate the catheter through the prostatic urethra, we must perforate the gland, by pushing a prepared sound through it—a much better means than opening the bladder above the pubes or per rectum.

In regard to atrophy of the prostate, calculous affections, epithelimata, cysts, tubercle, fibrous tumors, etc.—I can only remark that my limits place it out of my power to give them any other consideration than a mere enumeration.

Dr. Philip S. Field read the following paper:

The case in question is one of interest—not only from its

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obscurity, but also from the difference of opinion expressed by consulting physicians.

Its history (as near as I can trust to memory) is as follows: Cassandra P. an unmarried lady, formerly a resident of this county, called upon me professionally November 21, 1856, stating that two weeks previous she contracted a violent cold by sitting in a current of air during profuse perspiration, whilst suffering with her catamenia, which caused a cessation of the same. During the night she had a severe chill, followed by high fever, and on the following morning called in a homœpathic physician, who pronounced her case to be (as she expressed herself) "dropsy of the womb." She continued under this gentleman's treatment two weeks; was then conveyed by her parents to their residence in the country, and by them I was requested to attend her. Upon examination, I found that she was laboring under *ascites*, the abdomen being enormously distended by the effusion. There was almost an entire suppression of urine, not voiding over half an ounce in twenty-four hours; which was of a brownish red color, and thickly loaded with mucus. Complained of a dull, heavy pain over the region of the kidneys, with an occasional twang, as though pierced with some sharp instrument. Cupped her freely, and ordered an infusion of juniper berries, and bi. tart. potassæ. Continued this for several days, with some improvement in the secretions of the kidneys. Abdominal effusion very little if any diminished. Prescribed hydrarg. proto. chlor. ʒij; pulv. digitalis; pulv. rad. scillæ ʒi. M. and ft. Pills xx. One three times daily. Continued these until she became slightly ptyalized, with marked benefit. This I followed by an occasional hydrogogue cathartic, composed of elaterium and ext. colocynth comp.

Did not see her again for three weeks, owing to indisposition, during which time she was visited *once* by my friend Dr. Donaldson, who, finding her very much debilitated, suggested the propriety of giving some preparation of *iron*, and I had prepared pills of citrate of iron and quinine, each pill containing five grains—one to be taken three times daily.

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On visiting her after my recovery, I found that the abdominal effusion had almost entirely disappeared, and the kidneys gradually resuming their natural secretions. She stated that during my absence, she had suffered with violent pain of an intermittent character in the lower part of the bowels, which caused me to examine the seat of pain, and discovered for the first time a hard body occupying the position of the uterus.

I immediately suggested the necessity of making an examination per vaginam, to which she would not consent, without the advice of another physician, to which I cheerfully consented; and they selected an eminent surgeon of Baltimore, who, upon examination, pronounced her pregnant. I then made an examination, found the uterus in situ; the neck somewhat enlarged, and firm. By pressing firmly the neck of the uterus I could feel a large, hard substance, evidently occupying the walls of the *uterus.* I then examined the mamma and the areola around the nipple, but could discover no evidence of pregnancy. From the absence of any positive symptoms in my own judgment, I was compelled to differ with the *physician consulted*, and pronounced it a *fibrous tumor*—in which *diagnosis* I was confirmed by the concurring opinion of Dr. Donaldson, who, by request, visited her again with me—and which *time* has more positively proved, as the lady is enjoying at this date comparatively good health. Her catamenia has been regularly performed during the last three months, though the *tumor* still remains.

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ART. II.—*A New Edition of the Siamese Twins.* Recorded by WILLIAM B. BALL, M. D. Chesterfield County, Va.

I ENCOUNTERED a case on Thursday night last, which seems to me worthy to be recorded.

Was called to see Sarah, a slave, in her twenty-sixth year,

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and third confinement—once of a healthy child, now two years old, next a miscarriage at about the fifth month, and lastly of a pair of boys, the exact counterpart, I believe, of the "Siamese Twins."

The two children are about the same size, both males, seventeen and a half inches in length, perfectly formed, and weigh eleven pounds twelve ounces. The point of union begins at the ensiform cartilage, and continues down the middle line of the body to the umbilicus, in which it terminates. The thoracic cavities are distinct, and so I think are the abdominal, in their upper portion. The lower part, however, seems to be without any interposing tissue, although from outward appearances, two complete sets of organs exist therein. I was somewhat inclined to satisfy my mind upon this point by dissection, but concluded to keep them unmutilated, until our medical brethren of the city (whither I have sent them this evening) could have an opportunity of inspecting them.

I did not reach the case until after the birth was accomplished, and am informed of the following particulars by the attending midwife:

Labor pains commenced about night on the 18th instant, and at 11 o'clock the head of one was ushered into the world. The pains then ceased for about three hours, when they resumed, and the shoulder of the same child was pushed forward, quickly followed by the head of the second, and the *rapid* completion of labor, *without any further difficulty whatever*, by 4½ o'clock A. M. There was but one cord, very short (about eight inches), coming out directly *underneath* the abdominal union, and one placenta, in no way peculiar.

The midwife says neither child ever breathed. The mother affirms that she distinctly, and unmistakably felt them move, just before the head of the first one was born. My own impression is, that the first born *was* alive for a time at least, because its neck is quite swollen, from the efforts (I suppose) to deliver it.

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They have been carried to the full term evidently, with nothing unusual during gestation.

Such is the history of these monstrosities, and I wish you to inspect them for yourself.

The mother is doing well so far.

*Feb.* 20, 1858.

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ART. III.—*Obstruction of the Œsophagus by a Peach Stone.* By ROBERT A. GHOLSON, M. D., Petersburg, Virginia.

MANY years ago I was called to see a child about ten years old, the son of Mr. Porch in the county of Brunswick. I was told that about two days before, he was seized with a pain about the stomach while at dinner, followed by prompt rejection of every thing swallowed since. As he had been eating peaches stewed whole, the presumption was that he had swallowed a peach stone. With the exception of some uneasiness about the stomach, the child complained of nothing. I made him swallow, in my presence, a mouthful or so of water, and perceived that the water could hardly have entered the stomach before it was returned. To satisfy myself, however, about the nature of the case, I determined to apply the test of the "leaden hammer." Accordingly, I made him swallow a common bullet, with a silk cord attached to it, which I held in my hand, and from the length of the cord swallowed I was satisfied that there was an obstruction about the lower extremity of the œsophagus. I informed the family of the state of the case; and as the child would have to undergo a harsh and painful operation, I asked a consultation with Dr. E. A. Morrison of Laurenceville. As it was late in the evening, the operation was deferred until the next morning, when, in the presence of Dr. Morrison, I introduced an ordinary whalebone probang into the œsophagus. It passed without any difficulty until it reached the lower extremity of the tube near the cardiac orifice,



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where it met with a resistance, which no prudent force could overcome. As the child was suffering from extreme pain, he was allowed an interval of repose, when the operation was repeated, but with no better result. Thinking the operation might prove more successful in the hands of Dr. Morrison, remarkable for his nerve, firmness and decision of character, he was requested to make a trial of it. But the operation proved not more successful in his hands. The case was now assuming rather a grave character. The child had been subjected to three most painful operations, every one of which had been attended with the most excruciating suffering, the result no doubt of the pressure of the sharp end of the peach stone against the walls of the œsophagus. About three days had elapsed since the occurrence of the accident; and though nutritive milk and water injections had been occasionally administered, famine was making sad havoc with the vital energies. Looking to the hard and unyielding texture of the obstructing substance, nothing was to be gained by postponing the operation, apart from the danger of inflammation on the one hand and starvation on the other. Under these circumstances, and after full consultation, it was determined to force the stone into the stomach, if possible. It was with much difficulty, however, that we could prevail upon his parents to have him again tortured by another operation, notwithstanding we assured them that his life probably depended upon it. The common whalebone probang being deemed too elastic, another was prepared from white oak. This I introduced with some little difficulty down to the point of obstruction, when, by firm but gentle force, I felt it suddenly give way, and slip into the cavity of the stomach. I shall never forget how imploringly he begged for food as soon as he was relieved. His diet was confined at first to milk and water in small portions at the time, followed by rice, &c. He spat a little blood soon after the operation, but soon got well without a bad symptom.

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ART. IV.—*On Strangulated Hernia in Children.* By GEORGE A. OTIS, M. D. of Springfield, Massachusetts.

DR. WATSON, of the New York hospital, observes* that the *surgical diseases of children* constitute a department of surgery that has never been thoroughly studied, but which is worthy of serious attention. And he sarcastically expresses surprise that the industrious specialists of the present day have not invaded this promising field. It is certainly true that, while we possess a multitude of treatises on those diseases of children which belong to the domain of medicine, a knowledge of their surgical affections must be gathered from scattered sources.† Yet that class of surgical affections either peculiar to childhood, or which present material modifications when occurring at this period of life, is large and important. It includes a great portion of the deformities and vices of development: strabismus, torticollis, talipes; hare-lip, hypospadias, and spina bissida; congenital cataract and amaurosis; imperforate anus; nœvi materni. Phlyctenular ophthalmia and ophthalmia neonatorum belong to it. It embraces diastases, incomplete fractures, rickets, and congenital luxations; umbilical hemorrhage, gangrene of the cheek and vulva, otorrhœa, congenital hydrocele and hernia. Tracheotomy is commonly performed on young subjects, and the majority of operations for the removal of foreign bodies are required by them. In fine, it would be easy to frame quite an ample table of contents for such a treatise as is likely to result, according to Dr. Watson, from the industrial instincts of some modern practitioner.

The chief peculiarities of hernia in childhood have been described with great precision and minuteness; but the occasional occurrence of strangulation at this age has received

* Clin. Obs. on Surg. Dis. of Childhood, Stethoscope, vol. iii, p. 586.

† In the fifth and sixth volumes of his Bibliothèque, Fabre compiles a tolerably complete account of the surgical affections of children, but it is intermingled with other matter.

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little other notice from authors than an allusion to its rarity. Having been led to examine the subject somewhat carefully by two cases encountered in my practice, I have thought that such examples were sufficiently rare to render them matters of curiosity, and sufficiently common to prevent that curiosity from being idle, and that it would not be an useless task to group them together.

*I. Cases reduced by taxis.*—In view of the yielding and distensible nature of the tissues in childhood, it is probable that strangulated hernia occurring at this period is amenable to the taxis in a larger proportion of cases than in later life. Instances in which reduction is effected by this means are of course rarely placed on record. The following indicate some of the auxiliary measures which have been employed:

Case I.—Dr. J. Reid, of Southam, gives the history of a child of eleven months, with strangulated inguinal hernia, in which the protrusion was replaced without difficulty after the administration of a full dose of opium.*

Case II.—Dr. Anderson, of the Glasgow infirmary, relates the case of a child, nine months old, with a large tense bubonocele, strangulated for three hours. An approach to syncope was induced by eight leeches to the tumors and the warm bath, after which reduction was effected by the taxis.†

Case III.—I saw, Sept. 24, 1857, the child of M. M. aged fourteen months, with scrotal hernia of the right side, which had been strangulated twelve hours. The tumor was large, tense and painful. After an ineffectual attempt at reduction, I applied compresses saturated with ice-water for a short time, and then placed the child under the influence of chloroform, when the hernia was returned without much difficulty.

* London Lancet.

† Glasgow Medical Journal, 1827.

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*II. Cases of unrelieved strangulation.*—Velpeau remarks that strangulated hernia in infants is liable, without careful discrimination, to be confounded with a variety of other disorders of the abdominal organs. It would appear from the subjoined cases, that such errors of diagnosis have not always been avoided:

Case iv.—Mr. Pott saw an infant, one year old, die of a strangulated hernia, which had not been down two days, with all the symptoms of mortified intestine.*

Case v.—Reichel gives the account of a boy who had swelling in the right groin, with pain coming on after an attack of convulsions. As there was no testicle in the scrotum on that side, no constipation, and no tension of the abdomen, nothing was done beyond a dose of medicine. The child died, and, at the autopsy, the intestines were found covered with gangrenous patches; a portion of ileum was fixed in the groin with the testicle, and was constricted and gangrenous.†

Case vi.—The elder Sandifort describes the following case and gives a drawing of the parts. A child was born with scrotal hernia of the right side, which received little attention until the infant was three months old, when an attempt at reduction was made. The hernia being replaced, as was thought, a retentive bandage was applied, which made pressure over the external ring. Soon symptoms of strangulation were manifested, with such violence that the child died. The autopsy revealed a congenital hernia containing the end of the cœcum with a portion of ileum; the vermiform appendix adhered to the testicle and to the sac. The adhesion of the appendix to the testicle was firm, and probably existed before the descent of the latter.‡

* Percival Pott's Surgical Works, vol. ii, p. 33.

† Ludwig's Adversar. Med. Pract. vol. iii, p. 732.

‡ Icones Herniæ Congenitæ, quoted in Cayol's translation of Scarpa, p. 173.

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Case vii.—Gerard Sandifort tells of a child six months old, who died in the hospital at Leyden of a strangulated hernia on the *left* side. On dissection, a large sac was discovered, containing the entire cœcum, with its appendix, and a portion of ileum. The strangulated intestine was highly inflamed; the ileum was of a livid color; the cœcum was distended with air and fæces. The external ring was narrowly contracted.*

Case viii.—Professor Denonvilliers told M. Velpeau of the case of a child of eight months, who died with the symptoms of peritonitis. At the autopsy, a strangulated inguinal hernia was unexpectedly discovered.†

Case ix.—Mr. Hey, of Leeds, examined, in 1764, the body of a child, fifteen months old, who had died of strangulated scrotal rupture. He found a sac within the tunica vaginalis containing the caput colli; and, from this dissection, he described that sub-variety of congenital hernia for which he proposed the name of *hernia infantilis*, presuming it to be peculiar to early childhood.‡

One extraordinary case is recorded, in which an infant of ten weeks recovered from a strangulated hernia with artificial anus. It would appear that in this case the cœcum was protruded, and that strangulation existed twenty days before the gut gave way, though, at first, the course of the fæces was not completely interrupted. As the case is related in a rare work, I shall give it in detail.

Case x.—An infant was taken with a fit of crying and straining to vomit, which continued through the night. In the morning, the mother perceived a swelling from the inguen down to the scrotum. Little regard was paid to the prolapsed intestine, but a bandage was rolled very tightly

* Gerardi Sandifort's Tabulæ Anatomicæ, Fol. Lugduni Batav. 1804, quoted in Edin. Med. & Surg. Journal, vol. iii, p. 470. The case is remarkable on account of the protrusion of cœcum on the *left* side.

† Médecine Operatoire, 2d ed. vol. iv, p. 218.

‡ Hey's Practical Observations in Surgery, 3d ed. p. 226.

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about the belly. Two days after the child first complained, he voided a bloody matter by the anus, which discharge, mixed with a small quantity of fæces, continued nine days. A surgeon was then called, and found the scrotum vastly swelled, tense, and inflamed, and the whole abdomen inflated. The symptoms were mitigated by emollient fomentations and proper bandages, though the child continued to vomit as he sucked. A week after, the scrotum burst open, and the fæces were discharged through two orifices, which were dressed with digestive plasters. Mr. Gooch saw the child a few days after the bowel had given way; the discharges had reduced the inflammation, and vomiting had ceased; but for a week longer no excrement passed by the anus; it then gradually resumed its course, and the preternatural evacuations decreased. The openings in the scrotum healed in about three weeks; but the inferior one opened again and discharged fæces for five days, and then closed. Soon after there was another descent of the bowel, which was readily reduced, and the child was afterward perfectly cured by the use of a common steel truss.*

*III. Operations for strangulation.*—Mr. Lawrence, in his treatise on ruptures, refers to five operations for herniotomy in children. M. Velpeau recapitulates these, in the last edition of his work on operative surgery, and adds four other instances. Vidal gives additional information respecting some of these cases, observing that they are well worthy of remembrance as exceptional facts. I subjoin these cases, with a larger number derived from other sources, and include among them an operation of my own. The cases are arranged according to the age of the subjects:

Case xi.—Heyfelder, the celebrated surgeon of Erlangen, once operated for strangulated inguinal hernia in an infant eight days old. The result is not stated in direct terms.†

* Pract. Treat. on Wounds and other Chirurgical Subjects, Norwich, 1767. By Benj. Gooch, vol. ii, p. 207.

† Velpeau, Méd. Operatoire, vol. iv, p. 208.

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Case xii.—Dr. West recalls a striking case, in which Mr. Fergusson, of King's college, operated for strangulated inguinal hernia in a child seventeen days old.*

Case xiii.—In 1828, Dupuytren operated, at Hôtel-Dieu, on a strangulated scrotal hernia in a child twenty days old. Great difficulty was experienced in reducing and retaining the bowel. The child had several abundant stools during the operation. In the original report, the event is not mentioned; but Vidal, who was present at the operation, states that the patient died, a few days subsequently, of erysipelas. The rupture was congenital.†

Case xiv.—Mr. Hunt operated successfully on an encysted congenital hernia (*H. infantilis*, Hey), which had become strangulated in an infant only twenty-nine days old.‡

Case xv.—Sir Cæsar Hawkins relates a successful operation which he performed, on a child of seven weeks, with strangulated bubonocele.§

Case xvi.—In 1857, Mr. Wm. Rayner published a successful case of operation for strangulated bubonocele of the right side, in a child of seven weeks. Strangulation had existed for several hours, and stercoraceous vomiting had occurred.‖

Case xvii.—Potain operated successfully for strangulated congenital scrotal rupture in an infant two months old.¶

Case xviii.—In 1853, Mr. Curling operated, at the London hospital, on Henry Neales, aged nine weeks, who had suffered for two days with symptoms of strangulation in a congenital scrotal hernia of the right side. The abdomen was painful, and there had been feculent vomiting. The

* Lectures on Dis. of Infancy, Am. ed. p. 360.
† Lawrence, loc. cit. and Vidal, Pathol. Ext. vol. iv, p. 122.
‡ Journal Universel des Sciences Médicales.
§ London Medical Gazette, 1843, p. 113, and Jour. de Chir. 1843, p. 96.
‖ London Lancet, April 4th, 1857.
¶ Vidal, Pathologie Externe, vol. iv, p. 122.

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taxis was attempted before and after the patient's removal to the hospital. The sac was exposed, when the protrusion was easily returned. The sac was not opened; it appeared to contain coagulated blood. The wound was closed with sutures; in three days, it had united in nearly its whole extent. In a week, it had healed entirely; the child appeared well, and left the hospital. A few days afterwards he died of erysipelas.*

Case xix.—In 1851, Mr. Erichsen operated on a child ten weeks old, with congenital scrotal rupture of the right side, which had descended for the first time and become strangulated on the previous day. The taxis was tried in the warm bath, with the aid of chloroform. Ice was then applied to the tumor for two hours, two drops of laudanum given, and the taxis again attempted. Mr. Erichsen now operated. A knuckle of maroon colored intestine was found in the tunica vaginalis; the stricture, in the neck of the sac, was divided upwards and the gut returned. The testis and cord were dark and congested. Stitches, a pad and bandage were applied, and a drop of laudanum given every sixth hour. The child made a perfect recovery.†

Case xx.—Nov. 14th, 1851, Mr. Lawrence operated, at St. Bartholemew's, on Edward T****, ten weeks old, with strangulated congenital scrotal rupture of the right side. The symptoms were urgent, having existed for twenty-four hours. A loop of claret colored intestine was exposed; the testis was congested, the epididymis of a slate color. A director was with some difficulty passed into the abdominal cavity, the stricture divided, and the bowel replaced. The wound was closed with two stitches. In a few hours the child had two dejections. The next day, the wound was inflamed; the sutures were removed, and the parts poulticed. In ten days, the patient was discharged well.‡

* Med. Times and Gazette, April, 1853, p. 449.
† London Lancet, Sept. 1852.
‡ Ibid. Am. Reprint, Oct. 1852, p. 289.



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Case xxi.—In 1850, Mr. Erichsen operated on a child of ten weeks, with congenital bubonocele of the right side, which had been strangulated for three days. On laying open the sac, a chocolate colored knuckle of intestine was exposed. The tensely stretched external ring was with difficulty divided on the finger nail. The testis was dark purple. The gut was returned, the wound closed with sutures and a bandage, minute doses of calomel ordered, and chamomile fomentations applied. The child died on the fourth day, the bowels having never acted. On dissection, the intestine that had been constricted was found to be gangrenous, and there were traces of general peritonitis.*

Case xxii.—A child of eleven weeks was operated on at St. George's hospital, in October 1852, with recent oblique inguinal hernia, which had been strangulated three days. The sac was opened, and a long loop of slightly congested small intestine was replaced. The infant died in two days—of "bronchitis."†

Case xxiii.—In 1833, M. Goyrand operated on the infant son, four months old, of M. Carbonel, professor at Aix, with right scrotal rupture, ten days down, strangulated for three days. The symptoms were urgent. The tunica vaginalis being laid open, a brownish red convolution of small intestine was exposed. The stricture, at the neck of the sac, was divided upwards and outwards; the bowel was reduced, and the wound closed by a spica bandage. The curative process was complete in a fortnight. The hernia returned in two months. Four years afterwards the child was well, the rupture being retained by a truss.‡

Case xxiv.—In 1852, Mr. Erichsen operated on Arthur C—, aged five and a half months, with a large scrotal rupture of the right side, which had descended from time to

* London Lancet, Am. Rep. Oct. 1852.

† Medical Times and Gazette, Nov. 1853, p. 531.

‡ La Presse Medicale, March 1837, p. 179.

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time since the boy was three weeks old, usually returning *suâ sponte*, but had now been unreduced for six weeks. The rupture was congenital, and was complicated with hydrocele. Strangulation had existed for some hours, and the child was in a precarious state. The stricture, which was due to the external ring and a few transverse fibres of the cremaster, being divided, the bowel was returned, without opening the sac. The wound was united by sutures. The bowels moved in three hours, and the child recovered perfectly, the wound having cicatrized on the eighteenth day.*

Case xxv.—In 1831, M. Goyrand operated on an infant of six months, at the Foundling hospital of Aix, who had a large congenital scrotal hernia of the left side, which had been irreducible for eight days, and was attended with constipation and vomiting. The protrusion consisted of the sigmoid flexure, of its natural color, distended by hard fæces. It was necessary to enlarge the ring freely to push back the contents of the bowel. When this was accomplished, the gut was easily returned. The vomiting ceased; but diarrhœa came on, which nothing could restrain, and the child sank in forty-eight hours.†

Case xxvi.—Mr. Stanley operated for strangulated scrotal hernia, not congenital, in a boy of seven months. Peritonitis followed, for which leeches were twice applied. The patient rapidly recovered.‡

Case xxvii.—In 1853, Mr. Lawrence operated successfully on a little boy, one year old, with non-congenital scrotal hernia of the right side. Strangulation had existed for three days. Taxis having failed when the child was under the influence of chloroform, herniotomy was at once performed The sac was not opened.§

* London Lancet, Am. Rep. Oct. 1852.
† La Presse Medicale, 1837, loc. cit.
‡ Lawrence, loc. cit.
§ Med. Times and Gazette, 1853, p. 449.

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Case xxviii.—Mr. Long operated successfully on a non-congenital strangulated scrotal hernia, in a child fourteen months old, in the Bartholomew's hospital. The stricture, at the external ring, was tight and its division difficult. The tumor contained large intestine; the gut frequently came down during the progress of the cure.*

Case xxix.—M. Velpeau operated, in 1837, at La Charité, on an infant of fifteen months, with strangulated scrotal hernia complicated with hydrocele. The diagnosis was obscure, and the operation difficult. The result is not stated.†

Case xxx.—Professor Hildebrand operated on a child of eighteen months, affected with strangulated hernia. The event is not stated directly; the case is given in connection with that of Heyfelder (Case 11); one of them was successful, the other unsuccessful.‡

Case xxxi.—Dr. Robert Adams operated for strangulated hernia in a child aged eighteen months.§

Case xxxii.—Mr. Curling, in 1853, operated on Alfred Smith, aged twenty-one months, who had been affected for a year with non-congenital bubonocele of the right side. Strangulation had existed for thirty hours. The warm bath, freezing mixtures to the tumor, and chloroform had been employed without avail. The abdomen was tympanitic and painful on pressure, pulse 140, countenance anxious. An ineffectual attempt was made to return the hernia after the sac was laid bare; the sac was then opened, and a stricture divided at its neck. A dark colored loop of intestine was replaced. Two small arteries required the ligature. Fomentations were directed, and a grain of calomel every sixth hour. The next morning, the child took a teaspoonful of oil, and had several

* Lawrence, loc. cit.
† Velpeau, loc. cit.
‡ Ibid.
§ Vidal, loc. cit.

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copious discharges, when the abdominal tenderness subsided, and the calomel was discontinued. On the seventeenth day the wound had healed, and Mr. Curling believed that the parts were so consolidated that the cure would be radical.*

Case xxxiii.—In 1849, Mr. Luke operated successfully, at the London hospital, on a child, aged two years, with non-congenital scrotal hernia of the right side, which had been strangulated four hours. The external ring was divided, and the bowel reduced without opening the sac.†

Case xxxiv.—Roux had a successful operation, in 1853, on a boy two years old.‡

Case xxxv.—I operated, in 1854, on George M——, aged three years, with strangulated congenital scrotal hernia of the right side. A swelling in the scrotum, supposed to be due to hydrocele, had in this case been noticed a few hours after birth. When the child was two years old, the true nature of the affection was ascertained, the rupture reduced, and a truss applied. On several occasions the hernia had descended, and vomiting and constipation had ensued; but the mother had always, after a time, effected reduction, until the morning of October 23d, when she found the rupture down, and her efforts to replace it unavailing. An "eclectic" practitioner was now consulted, who administered various drugs without benefit. I was called on the evening of the following day. Strangulation had then existed for thirty-six hours, and the symptoms were urgent. There was the wildest jactitation and distress; the face was pale and anxious, the abdomen tympanitic and tender, and there was frequent feculent vomiting; the tumor was tense and painful, with a pinkish blush. The child was evidently in such a precarious state, that the parents at once assented to an ope-

* Med. Times and Gazette, Feb. 9, 1853.

† Lancet, Feb. 1850.

‡ Archives Générales de Méd. 1833, t. xxiv, p. 586.

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ration. As none of the usual measures had been adopted, while I waited for my instruments and chloroform, I directed that the patient should take half a grain of opium and be placed in a warm bath. In less than half an hour, the child was placed under the influence of chloroform, and I tried taxis gently and ineffectually, and, without further delay, cut down upon the sac, cautiously opened it, and exposed a loop of claret colored small intestine with a bit of omentum. The testis lay at the inner inferior part of the tumor and was congested. About a drachm of serum escaped as the sac was opened. The stricture, which was very tight, seemed to be at the neck of the sac. It was divided upwards. There was little or no hemorrhage. The wound was dressed with adhesive strips, a compress, and spica bandage. Dr. D. P. Smith kindly assisted me in the operation. Severe peritonitis followed, which was combatted by calomel and opium. The child had two stools soon after the operation. The wound was not completely cicatrized until the expiration of five weeks. About two months subsequent to the operation, the hernia returned. It has since been retained by a truss. The child is now a healthy little fellow of seven years. I am inclined to believe his rupture is radically cured.

Case xxxvi.—In 1854, Mr. Quain operated, at University college hospital, on a boy five years old with strangulated congenital rupture. The hernia was returned without opening the sac, and the child made a rapid recovery.*

Case xxxvii.—Sir G. Ballingall operated, in 1826, on a boy of thirteen, with strangulated bubonocele of the right side, of five days' standing. On laying open the tunica vaginalis, the hernia was found, with its proper sac, lying above the testis. A chocolate colored knuckle of intestine was found in the sac, with coagulable lymph thrown out about it. The stricture was in the external ring. The boy made a good recovery.†

*Med. Times and Gazette, Dec. 1854.
†Edinburgh Med. and Surg. Journal, 1826.

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Case xxxviii.—Malgaigne relates that a French hospital surgeon lost a son, thirteen years old, with strangulated inguinal hernia. The taxis was attempted six times in twenty-four hours. The operation was then practiced, and a gangrenous entero-epiplocele was found.*

Case xxxix.—Mr. Solly operated, in 1853, at St. Thomas's hospital, on a boy of fourteen with strangulated bubonocele of the right side. The symptoms were very urgent previous to the operation. The case did well.†

Case xl.—In 1852, a boy of fourteen underwent the operation for strangulated hernia at St. George's hospital. He had a congenital scrotal rupture of the right side, two days strangulated. The cœcum and portions of ileum and omentum were contained in the sac. The appendix cœci was gangrenous. A portion of omentum was removed at the operation, and a ligature was thrown round the appendix. The boy died in four days of peritonitis.‡

It appears, then, that strangulated hernia in childhood is least infrequent previous to the age of two years, and that towards the age of adolescence it is again occasionally observed. In explanation of these facts, it may be suggested that, in early infancy, it is impracticable to maintain the constant application of a well adjusted truss, and that crying and the swathing of the abdomen by tight bandages are efficient causes of the distension of the protruded intestines by flatus and fæces. After the third year, the hernia of children are generally retained by trusses, and very many are radically cured.§ Towards the age of fourteen, a liability to the causes of strangulation in adults commences.

In addition to the yielding nature of their tissues, already

* L'Union Médicale, 1854, vol. viii, No. 48.

† Med. Times and Gazette, Feb. 19, 1853.

‡ Med. Times and Gazette, Nov. 1853.

§ M. Malgaigne estimates that, in early infancy, one child in twenty is affected with hernia; at ten years, one in sixty-six. Vide Lectures, Va. Med. Journal, vol. iii, p. 41.

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noticed in explanation of the rarity of strangulation in children, may be adduced the circumstance that their herniæ are almost always of the congenital form, and that the channel of communication with the abdomen is consequently usually very free. Furthermore, we know from the researches of King* and Bryant,† that the alterations in hernial sacs leading to strangulation do not commonly occur until protrusions have existed a number of years. Mr. Lawrence's explanation, that children "are less susceptible of acute inflammation," is certainly erroneous.

It is curious to observe that out of twenty-six of the preceding cases, in which the nature of the rupture is reported, not less than nine were exceptions to the common rule, six being non-congenital, and three of the encysted variety. These cases suggest another circumstance favorable to strangulation in children: in eight instances of the twenty-six, the sac contained cœcum or some portion of the large intestine, a condition long ago adverted to by Pott and Scarpa as an impediment to reduction.

I have nothing to add, on the subject of diagnosis, to what is laid down by authors in regard to the herniæ of later life. The instances of error I have recorded, will lead practitioners to be on their guard in cases of children affected with constipation and vomiting.

Prompt action, so requisite in the treatment of the strangulated hernia of adults, is still more indispensable when the accident occurs in children. In four of the preceding cases, the bowel was found gangrenous: in case 38, after one day, in cases 4 and 40, after two days, and in case 21, after three days, of strangulation. In case 20, an infant of ten weeks, the bowel was in a bad state after strangulation of twenty-four hours' duration. The timely application of the taxis will be generally successful. It should be aided by the use of chloroform; and the warm bath, cold to the tumor, and opium, may be used if there is time. But if the symptoms

* London Med. Gazette, May 5, 1843.
† Guy's Hospital Reports, 1856, p. 83.

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are urgent, great hazard would be incurred in waiting for the effects of these auxiliary measures, and the practitioner should hasten to operate as soon as gentle taxis, with the patient in the anæsthetic state, has proved ineffectual. In the cases cited, the shortest duration of strangulation previous to the operation was four hours, the longest, five days; but in the latter case the bowel was chocolate colored, and the patient, a boy of thirteen, had a narrow escape with his life.

The operation, in children, presents no peculiarity of moment. As the hernia is perhaps invariably external or oblique, it will be safe to divide the stricture upwards and outwards, or even directly upwards. In fourteen cases, in which the seat of stricture is mentioned, it was constituted by the neck of the sac in four, and by one or other of the abdominal rings in ten. There was no trouble from hemorrhage except in one instance (case 32), in which two small arteries needed the ligature. If the tunica vaginalis is opened, it will be well to observe Sir Astley Cooper's precaution, not to extend the incision too low down, lest the testis should be inconveniently exposed, while the wound is healing. In the English cases, the wound was commonly united by sutures. They caused trouble in one case (case 20). In the operations by French surgeons, union by second intention was sought.

Of the thirty operations related, the event is noted in twenty-seven, of which nineteen recovered and eight died. It is hardly fair to include in the list of deaths, case 18, in which the wound had healed, when fatal erysipelas supervened. In case 22, also, the patient succumbed from bronchitis, the symptoms due to strangulation being entirely relieved. Excluding these, we have six fatal cases, in twenty-five operations. But in three of these cases, the bowel was gangrenous when the operation was performed. Deducting these, there remains a mortality of about one in seven, which probably represents pretty accurately the results of herniotomy in children when seasonably practiced.



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In five operations, the sac was not opened, and they were all successful. The surgeon probably will not err in attempting to adopt this method, provided his mind is at rest respecting the condition of the bowel.

In twenty-one cases in which the position of the hernia is recorded, it was on the right side in nineteen, and in two on the left side. For an explanation of this and analogous facts, we must probably wait until physiologists have solved the problem of "why we are right-handed."*

Though Billard gives us a case of femoral hernia in an infant seventeen days old (Josephine Romer), and Sir Astley Cooper met with an example in a girl of seven years, yet such cases are such rare exceptions, that crural rupture may be considered a disease of maturity exclusively. I find no mention of strangulated crural hernia in a younger subject than one mentioned by Scarpa, a lad of seventeen.†

I know of no example of strangulated umbilical hernia in childhood. The two cases of irreducible exomphalos, or rather eventration, operated on by Professor Mott,‡ can scarcely be admitted under this head.

I would sum up the results of these observations by the following conclusions:

1. Strangulation seldom occurs in the herniæ of childhood, and only in the inguinal variety.

2. The taxis is more frequently successful, in proportion, than in adults. The auxiliary measures should be limited to chloroform, opium, the warm bath, and cold to the tumor.

3. If it is impossible to reduce the bowel, the progress of the symptoms is more rapid than in adults. If you temporize and postpone in children's cases, you will be too late.

4. The mortality after herniotomy in children is less than

* The researches of Wrisberg on the descent of the testicle, and of Camper on the inguinal canal, account for the greater liability of the right side to hernia over the left, in the proportion of 7 to 4 only.

† Supplement au Traité Prat. des Hernies, p. 27.

‡ Cooper's Surgical Dictionary, vol. ii, p. 38.

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in adults. Where the operation is seasonably practiced, success is almost uniform.

5. The extra-peritoneal operation is preferable when not counter-indicated.

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# TRANSLATIONS AND SELECTIONS.

## I. *On Ready Diagnosis.* By Prof. Forget of Strasbourg.

"Qui voit tout, abrége tout."

"The art of diagnosis consists essentially in the combination of all the elements which can aid, directly or indirectly, in the elucidation of diseases." This incontestable axiom is made to do good service by the investigators of our day, who are prone to exaggerate the value of each of the thousand minute details with which they are occupied, sometimes before their reality even has been sufficiently established. To this fever for inventions, this accumulation of hypothetical and often contradictory results, the name of "progress" is given. Be it so! Science indeed advances and is enriched daily; but it is in much danger of being buried beneath its mass of treasures, unless some one shall arrange them, assorting the crude products, and assigning to each its degree of value in every day practice. This nobody seems ready to undertake. Every one brings his grain of sand to the edifice, no one directs where it shall be placed; there are laborers in cohorts, but no architects, for we cannot so designate even the best of our authors of treatises on practical medicine. Once a book on practice was an event, and when Fernelius, Sydenham, Stoll, Borsieri, Cullen, or Pinel, published the results of long and conscientious study and meditation, their magistral works made a deep impress on the field of science, and commanded the attention of the world. Now-a-days ten neophytes set to work,* separately and silently, and relate what others do before they have learned what they will do themselves, commencing the novel by the last chapter, as the saying is, with the sole

* It is scarcely necessary to remind the reader that a number of the recent German and French works on practice have been compiled by associations of from three to twenty collaborators.—*Trans.*

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object of gaining by the speediest road a place at the professional banquet.

Hence we examine these compilations in vain for those large views which open up new horizons and strip the veil from obscurities. We find no harmonious whole, no lucid simplification. Open any modern pathological treatise you please at the article *Pleurisy*, for example: you will be told that inspection, palpation, mensuration, percussion and auscultation serve to diagnosticate this disease. The enumeration is exact, but as to any comparisons or reflections on the relative value of these various semeiotic means, they are not to be found, and the student is left to attach the same importance to dullness and to egophony; it will be happy for him, indeed, if the author does not insinuate that resonance and amphoric murmur are the rule, under pretext that these phenomena have lately been observed in a few cases of pleuritis. Turn over to *Typhoid Fever:* you will learn that fever, prostration, delirium, the fuliginous tongue, cœcal gurgling, epistaxis, diarrhœa, etc. are the fundamental features of this affection, whence it results that all these symptoms have the same significance, which is requisite in order to inculcate the idea of a general affection, *totius substantiæ.* When you encounter in practice typhoid fevers without a typhoid state, or frank phlegmasiæ, presenting the same phenomenal portraiture as is here ascribed to typhoid fever, you may get on as best you can. It is thus that confusion is eternalized; it is this want of comparison and logic which perpetuates chaos and maintains the authority of our modern augurs.

"A disease, that is to say, a group of morbid elements, being given, ascertain the order of their subordination over to the other," or the degree of influence which each of them exercises on the rest. The mode in which this problem has been comprehended and solved, is in truth the history of medical science, for it immediately conjures up every system of doctrine. According to the ideas which have prevailed on the nature and essential elements of disease, vitalism, humoralism, solidism, etc. have flourished or decayed. We do not propose to enter on this vast subject. We accept the notion of diseases commonly presented, and ask for a thread to guide us through this immense labyrinth. In the first place, we may lay down: 1. That in a practical point of view there is no single essential element for all diseases, that is to say, that each of the exclusive doctrines is vitally defective and inadmissible; 2. That the principal elements vary or may vary in each class of diseases; thus in a given neurosis, the element strength or the element debility may alternately

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dominate; 3. That this same variability, in a practical point of view, of the dominant elements, may present itself in each disease or in each particular patient. The demonstration of these propositions, which remove us far from the exclusive vitalist, organicist, and chemical doctrines, would embrace the entire field of pathology. We will attempt, however, to sketch a general outline, to suggest the processes by which a solution of the proposed problem should be attained.

We know that there are dominant and subordinate morbid elements. But our ignorance of the primary, essential, really dominant elements is often so great, that, to our astonishment, we often see a secondary or apparently accessory element assume a predominant importance in a therapeutic point of view. Such in a multitude of cases is the element *pain*. This fact does not imply the absolute pre-eminence of this element. The toxic principle is the essential element in cases of poisoning and in contagious and infectious disorders, in syphilis, variola, typhus, etc. The rational indication is to eliminate or neutralize the toxic agent. But it is only in the minority of cases that we have the ability to do this; yet we still cure intoxications for which we have no direct antidote. Sometimes this is by allowing nature to act, as in the febrile exanthemata. In other cases, it is by combatting the effects of the poison, and keeping the patient alive till its virulence is exhausted, as in poisoning by acrid or narcotic substances; and though, in these cases, we direct our attention to the secondary elements, to the inflammation or adynamia, the poison indirectly opposed is still the capital element. It is this that renders the maxim *naturam morborum curationes ostendunt* a most fallacious one, for it would require us to admit as many essential natures in the same disease as there are therapeutical methods applicable to it.

Having premised thus much, let us enquire what are the sources whence the so called primary or capital elements of diseases are to be derived. Of these sources, the most natural is unquestionably afforded by *etiology*, as indicated by the aphorism *sublatâ causâ tollitur effectus*, an aphorism as delusive as the last. We have shown elsewhere the obscurities and fallacies which often oppose the search for the real causes of disease, and have concluded that the causes of importance as regards treatment are constitutional causes difficult to reach, which happily do not always prevent recovery. So that this etiological doctrine, so imposing at the first glance, has a much more limited application than is commonly imagined, as we have shown in speaking of poisoning.

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The most fruitful source whence important and positive elements of disease are to be derived is, despite what is said to the contrary, organic and functional *symptomatology.*

It is true that behind an inflammation or other organic lesion, there may exist, and often does exist, a general or special cause; but too often, alas! this cause is occult, and quite beyond the reach of remedies. We are forced then to come down to the obvious phenomena, and to accept them, at least provisionally, as primary elements, especially when the other phenomenal details of the disease naturally flow from them. Such are, in general, idiopathic inflammations; such are certain diathesic affections even, as tubercle and cancer; such certain functional diseases without appreciable material lesions, designated neuroses. The best that we can do in these cases is to attack the visible and tangible element, else we strike in the dark, and may deal a blow to the patient rather than to the disease.

In a practical point of view, then, the so called organic or symptomatic classifications of diseases are less vicious than they appear. They are as rational as circumstances permit, inasmuch as they express the positive facts, beyond which we can ascend only by inductions which practical experience and humanity condemn: *nil magni facias ex mera hypothesi.*

The *progress* of diseases is a more limited but not less certain source of capital elements. Thus the intermittent character of disease is often of such predominant importance, as to be the one fact to be taken into consideration, as in pernicious fevers. The slow or rapid, acute or chronic, progress of a disease is also a major element, which is the basis of most important practical determinations; for just as it is imperiously necessary to combat promptly and vigorously diseases which place life in immediate jeopardy, as pneumonia, peritonitis, or meningitis; so it would be most irrational to attempt to jugulate disease of slow progress.

The *terminations* of disease are likewise the source of important indications, according as they result fortunately by the unaided powers of nature, as in erysipelas, simple icterus, etc. or lead to grave complications, as in suppuration in pneumonia, aneurism in endocarditis, etc.

The ancients attributed great importance to *prognosis;* but prognosis is only a deduction from the causes, progress, and terminations, and consequently is comprised in these elements.

*Complications* constitute, in certain cases, elements of greater gravity than the primary disease itself: for example, the cerebral and pulmonary complications of typhoid fever,

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meningitis in erysipelas of the face, pericarditis and endocarditis in articular rheumatism, etc.

Lastly, the *treatment* is the source of most important indications; for there is no better guide, practically, than the results of the medication employed, and nothing indicates more positively the necessity of a change of measures than the negative or injurious effects of those previously used. It is this incontestable principle which furnishes empiricism with the strongest argument it possesses.

From these brief considerations, it results that each element belonging to diseases may, in its turn, constitute the leading element. Hence the insufficiency of exclusive doctrines; for the relative importance of these varied elements cannot be predicated in advance, and essentially depends on the peculiarities of each particular case.

Our present intention is to examine the relations of the elements belonging to the class of symptoms, which form the principal, though not unique basis, on which diagnosis is founded. The student who has been initiated into a knowledge of the characteristic signs of different diseases, by learning individual symptoms, should proceed to study the semeiotic elements, hitherto separately considered, in these relations to one another, in their rational connection, in a word. This intellectual labor constitutes what I call the *ready method of diagnosis*, which conducts us, by the shortest path, to a sufficient knowledge of the disease.

I use this term in opposition to *the classical method*, which arrives at a knowledge of diseases only by reviewing methodically and minutely, in accordance with a given formula, all the details of the case. In instituting a parallel between these methods, I do not pretend that the former is surer than the latter, or sufficient for every case. On the contrary, the classic method is more complete and solid. But in a multitude of cases, an adequate knowledge of the case may be acquired, without pursuing the interminable meanderings of the classical process, and the latter can add nothing but conjoinative evidence to the precise diagnosis already attained.

If the ready method had no other use than to abridge the examination, and exhibit the talent for observation and tact of the practitioner, its advantages would be small. But it spares the patient much fatigue, and relieves him from prolonged manipulations, dangerous mental and physical efforts and varied annoyances, entailed by the stereotyped examination in true classical style. Important facts are brought out clearly, stripped of superfluous accessories, and unob-

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scured by erroneous or equivocal replies from the patient. Moreover, expeditious diagnosis is a practical necessity, not only in reference to the patient too feeble to comply with the exigencies of the classic mode, but in regard to the majority of practitioners, who either know, or, at all events, practice no other. It is a delicate subject to treat, but it must be admitted that the complete classical method is almost confined to the schools and the savans. It is notorious that, as soon as the students leave the benches, they forget the use and utility of the thousand minutiæ they have been taught. Pressed for time, harrassed by the difficulties, the prejudices, the vexations encountered at every step in private practice, very many come to be satisfied with a ready method of diagnosis of almost any sort; and God knows what sad blunders result from this voluntary or constrained negligence.

It is with a view of offering to practitioners of this class an equivalent, in facility, for their habitual methods, but an equivalent far superior in value and security, that I have undertaken these disquisitions on diagnosis; which I would term the elements of medical algebra, were not the metaphor too ambitious and false; false, inasmuch as our art can never pretend to the precision of mathematical science.

Without going back to Pinel, who seems to have first conceived the idea of framing a formula for the interrogation and examination of patients, whoever has turned over the pages of one of the innumerable clinical manuals, compends or treatises published in the last thirty years, must have noticed the formal systems of examination; which, under the pretext of preventing the practitioner from blundering, inveigle him into a labyrinth, and take him through endless windings to a goal he might generally reach in a straight line. The laudable intentions of teachers have led, in fact, to those interminable books of questions, of which three-fourths, at least, are foreign to the case in point. I have never known a student or physician willing to load his memory with these ponderous protocols, even were they signed Bouillaud or Piorry. For common sense teaches that the interrogation should be confined to subjects necessary for the elucidation of the case in hand, which is commonly to be attained by simple and natural means, as we shall see.

Thus, for what are termed the *preliminaries* of the case, the *sex* and *constitution*, we see the *age*, written on the features, need hardly be ascertained mathematically. *Menstruation*, *marriage*, *maternity*, the *number* and *health* of *children* and of *parents* are of importance in certain cases only. The *pro-*

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*fession*, *regimen*, and *antecedent diseases*, are common places of no value in a multitude of cases. None of these circumstances will lead us to the diagnosis of a disease, though many of them it is well to know, when the diagnosis is once established.

Coming now to the *present disease*. In many cases of external affections, medical or surgical, the disease stares us in the face, and abridges the interrogation greatly. Without speaking of traumatic lesions, all diseases affecting the skin and the mucous membranes accessible to the eye or touch; next all diseases which are reflected exteriorly: icterus, scurvy, chlorosis and other cachexies, typhoid diseases, convulsive and paralytic affections, diverse dropsies, etc. etc. all give their name at the first glance, and require but few questions. In some instances the sense of smell instructs us before or simultaneously with the sense of vision: as in gangrene, the puerperal state, cancer, the typhoid state, etc.

In the exclusively internal diseases, after a careful glance at the general physiognomy of the case, the first question should be: *Where do you feel pain?* the hand pointing out the exact seat indicated by the reply. The second question is this: *How long have you been sick?* and the reply informs you whether the disease is acute or chronic. Provided with these two notions, *seat* and *duration*, the examination already assumes a precise direction, and you proceed, without waiting for other information, to the exploration of the organ or apparatus supposed to be affected, adopting first those means which procure the most precise information, and often the diagnosis is evolved in this first enquiry.

Having ascertained the material or *organic* conditions of the disease, as far as possible, you proceed to investigate the *functional* symptoms of the diseased organ, always in the order of their importance in a diagnostic point of view.

The disease once ascertained with precision, the hardest part of the task is accomplished. It remains to obtain information relative to the *etiology*, *progress*, *complications*, and *therapeutic means*, respecting all the *anamnestics*, in short, that may be of utility. But the examination is concisely conducted in the directions indicated by the determined nature of the disease.

We see that, apart from the two questions already given, the examination is altogether a relative affair, and admits of no fixed formula. But, as we shall see, there are particular formula applicable to particular diseases, formulæ often susceptible of great abbreviation.

Having achieved the examination of the organ and disease,



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it is requisite to pass the other organs in review according to some settled plan, the choice of which is unimportant. Be careful to seek first for the capital symptoms, the presence or absence of which implies the integrity or alteration of the organ or function under examination. Thus the epiphenomena or complications are detected, and they must be looked for, even in the absence of suspicious symptoms.

But there are local diseases without pain, general diseases which cannot be accurately determined, affections, in short, without local symptoms or seat; such are certain phlegmasiæ, termed latent, many organic lesions, some neuroses, intermittent fevers in the interval, certain humoral diatheses. We are then compelled to adopt the formal classic method, abbreviating as we can, and adhering strictly to enquiries relative to the organic and functional state, before descending to common place aimless questions. Example: a patient presents himself with no actual symptom, and gives us no information. We proceed to the examination, and discover a tumefaction of the spleen. It is highly probable that the patient has intermittent, a fact determined by a few questions. Another subject presents no appreciable material lesion, and we can elicit no satisfactory replies; but a paroxysm soon supervenes of chill, fever, and sweating, and again reveals to us the nature of the affection. Such cases are among the most unfavorable to the ready method; but in such the classical method does not shine. Another example: a woman reduced to marasmus has been attended by several physicians who have not ascertained the nature of her complaint. We examine the details of the case, and are not more fortunate than our predecessors. But the idea occurs to us to taste (!) the urine, and we detect a diabetes mellitus. In fact the sweet taste of the urine is a pathognomonic sign offering one of the most striking examples of ready diagnosis.

These enigmatical cases constitute what I call *veterinary medicine*, in which the physician, in the absence of verbal information, is compelled to proceed as in the cases of animals. These cases are frequent; for they comprise, apart from stupid people, children, foreigners, delirious, apoplectic, asphyxiated patients, etc. etc. The best plan in every case is to proceed at once to search for the affected organs, by the material processes of palpation, percussion, auscultation, etc. These cases have not been sufficiently provided for by the classic method.

Diagnosis, in general, should be divided into positive or negative, according as its object is to determine the presence

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or absence of lesions. Positive diagnosis arrives at the most insignificant symptoms, and negative diagnosis elicits the organic or functional evidences which imply the integrity of organs. The latter often leads to the former, as when, without any preliminary indication of the seat of trouble, we are compelled to pass all the organic apparatus in review.

The most constant effect of an organic lesion is to produce functional derangement; therefore from the integrity of function, we infer the soundness of the organ. On this principle, the theory of negative diagnosis is founded on the determination of the most significant functions, just as positive diagnosis is based on the determination of the most expressive symptoms. This premised, I proceed to certain formulæ for negative diagnosis, applicable to the principal organs.

*Digestive apparatus.*—Have you appetite? How is your digestion? Are your bowels regular? Affirmative replies on these three points afford a strong presumption that the disease is not located in the digestive organs; for there is scarcely any affection of this system, that does not modify the appetite, digestion, or defecation.

*Respiratory apparatus.*—Do you breathe well? Have you cough? Do you raise? Satisfactory replies make it probable that these organs are in a good state, for dyspnœa, cough and expectorations are inherent characteristics of most disorders of this apparatus.

*Circulatory apparatus.*—Do you feel your heart beat? This is about the only question you can address to common people; but it is adequate in most cases, almost every heart disease producing palpitation or præcordial distress. The pulse and auscultation will clear up the diagnosis.

*Cerebro-spinal apparatus.*—Here questions are, strictly speaking superfluous. The physiognomy, the speech, the gait and motion, almost always indicate at once whether the nerve centres are intact.

*Apparatus of special lensation.*—Do you see and hear well? Such are almost the only questions appertaining to this category; for the organs of taste and smell belong to the digestive and respiratory apparatus, and skin diseases reveal themselves.

*Urinary apparatus.*—Do you urinate without trouble? Is your water clear? These two questions are in general sufficient.

*Genital apparatus.*—Inspection, and the two preceding questions suffice in the case of males. In females, we enquire: Are you regular? Have you the whites? Replies

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to these questions convey what is essential respecting puberty, pregnancy, the menopause, the different affections of the uterus and vagina; for disordered catamenia and vaginal discharges of some sort characterize almost all the sexual derangements of females.

We see by these examples how easy it is to arrive at a negative diagnosis, by keeping to the radical essential elements, which imply the rest. Of course, where practicable, the *ready diagnosis* should be corroborated by other questions and the usual methods of exploration. I wish simply to say that a negative diagnosis, sufficiently accurate for the generality of cases, may be attained very promptly. It should be an invariable rule to accompany or follow the interrogation by palpation and inspection of the organs examined. An abnormal swelling, or the provocation of pain by pressure may throw a flood of light on the morbid condition, which normal conformation and insensibility confirm the replies favorable to the idea of health.

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*Chemical Final Causes—as illustrated by the presence of Phosphorus, Nitrogen and Iron in the higher Sentient Organisms.* By George Wilson, M. D., F. R. S. E., Regius Professor of Technology in the University of Edinburgh.—From Edinburgh Essays.—(Concluded.)

### *IV.—Iron in the Human Organism.*

The elements hitherto considered are all nonmetallic, but this sketch would be blameably imperfect if no organismal metal were referred to. And among the organismal metals, iron is par excellence the metal, as certainly as it is, by the testimony of ages industrially the most excellent of them all.

All countries have honored the smith, and he would wonder more than he does at his own skill, if he realised that the iron which he hammers is hammered not merely by iron in his hand, but also by iron in his blood. Yet the function of this iron is so little known, that, though statistical men have calculated how many rail roads might be made out of the blood-iron of a generation of mankind, the most acute and accomplished chemists tell us, to take the words of one, that "we are unfortunately perfectly ignorant regarding the special uses of iron in the animal economy."*

* Lehmann's Physiological Chemistry. Cav. Soc. Trans. vol. i, p. 443.

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And I have to turn to a poet to find a reason why it is so useful. Alfred Tennyson, in his Princess, makes the father of his heroine exclaim, when his stately daughter shows no signs of relenting towards the wounded prince:

> "I've heard that there is iron in the blood,
> And I believe it."

Old King Gama's final cause for iron in the blood was to secure "a steel temper" for those in whose veins it ran largely. He would have promised the chemist a large percentage of ferric oxide from the blood of the Great Captain, whom his countrymen loved to call the Iron Duke. This is the only final cause I remember to have seen assigned for blood being chalybeate. Perhaps the fine satire of the poet may quicken us to discover others.

Iron is intermediate in properties between the very oxidable metals, such as potassium, and the very unoxidable metals, such as gold. The former yields compounds too fixed, the latter compounds too variable, for the necessities of the living organism with its nicely balanced affinities, and its stable-unstable equilibrium. Far from either extreme, iron belongs to a group including aluminium, chromium, manganese, nickel and cobalt; but it differs from them all, and conjoins fixity and variability to an extent which none of them do.

Iron as a metal is readily crystallizable; oxidable at ordinary temperatures even in mass; peculiarly susceptible of magnetization; fusible only at a very high temperature; agglutinating so as to admit of welding occurring at a somewhat lower heat; and possessed at the same, and at higher temperatures, of a peculiar affinity for carbon. It is further remarkable as admitting of a singular passive as well as an active electrical condition.

Iron forms three important compounds with oxygen, besides a fourth (ferric acid) not requiring notice. The first, or protoxide, which consists of 1 unit of metal to 1 of oxygen, is a powerful base. The third, or peroxide, which consists of 1 unit of metal to 1½ of oxygen, is a weak base, and cannot unite with carbonic acid. The second, which as compared with the first and third is intermediate in composition and also in properties, especially so far as basic power is concerned, is strikingly characterized by being magnetic, and is called in consequence the magnetic oxide. Through these three stages of oxidation, iron can rapidly pass backwards and forwards, altering its basic and magnetic powers as it changes. As peroxide it has a remarkable attraction for or-

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ganic matter, familiary exemplified by the difficulty experienced in removing iron stains from linen, and turned to excellent account by the dyer and calico printer. This property does not belong to the protoxide, but all the oxides of iron resist precipitation from their salts by alkalies when organic substances like sugar are present, in consequence, apparently, of combining with them.

With the great majority of the non-metallic elements iron forms compounds similar to those which it forms with oxygen. Among these are the remarkable combinations with carbon, which confer upon cast iron and steel their valuable properties, and the curiously complex radicals with carbon and nitrogen (ferrocyanogen and ferridcyanogen), which occur, for example, in prussian blue, where iron in part acts as a metal, in part acts as a non-metal, as if it replaced both the sodium and the chlorine of common salt.

In virtue of those properties iron can accommodate itself as few metals can, to the metamorphoses of the organism. In the arterial blood full of oxygen it can become a peroxide, cleaving like a dyer's mordant to the organic matter of the corpuscles or blood cells. In the venous blood, containing little oxygen, it can become protoxide, perhaps combining, as has been suggested, with carbonic acid. At both sets of the capillaries, it may at the crisis of change of the blood from venous to arterial, and from arterial to venous, transiently become the intermediate magnetic oxide. In one or other of those forms, or in similarly variable states of combination with other elements than oxygen, it can enter into the composition of the various solids and fluids of the body in which it is found occurring, and perform, as it does even in the inorganic ferrocyanides, exactly opposite functions in neighboring portions of the same tissue. At the same time, its combinations are far removed from the category of fragile chemical compounds; even those with organic substances, such as the dye mordants, resisting the decomposing action of powerful acids and alkalies.

Now, let the characters of iron which have been noted be regarded simply as exponents of a conjoined mobility and stability, without attaching any value to the particular modes in which those characters are supposed above to be organismally serviceable, and let us see how far the metals most resembling iron agree with it in such properties as the dominant metal of the body must possess. Chromium has a basic peroxide and a strongly acid, extremely unstable, higher oxide (chromic acid), but no protoxide or intermediate oxide. Practically it could occur in the body only as the basic

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oxide, a substance having few affinities, for chromic acid is rapidly destroyed by organic substances and reacts destructively on them, so that it is not surprising that its salts are poisonous.

Aluminium forms only a peroxide, alumina, so that it is an unpliant, unaccommodating metal. Alumina, moreover (the dyer's most useful mordant), has so excessive an attraction for organic matter, with which it forms insoluble compounds, that it cannot take an active part in organismal changes. In truth, when taken internally, it is prevented by this precipitation in an insoluble form along with the first organic substance which it encounters, from entering the blood except in minute quantity, and it is not retained there.* If, indeed, there is any justice in the statement that bakers are in the habitual practice of adding alum to bread, we must be continually swallowing alumina, yet none is found in our blood.

Manganese as a metal is the very reverse of aluminium, and too variable for the wants of the living economy. It resembles iron, but has a wider range of affinities, and it is very feebly magnetic. It oxidizes so rapidly in air, that it can only be preserved in sealed tubes, or under liquids containing no oxygen.

In accordance with this oxidability, it forms four non-acid oxides, three corresponding to those of iron, but the fourth, or black oxide, having no analogue among the iron compounds; and two acid oxides, one manganic acid, corresponding to ferric acid, and like it very unstable, the other permanganic acid, also, though in a less degree, an unstable compound. This susceptibility of oxidation in various degrees, which, moreover, implies a power of uniting variously with other bodies than oxygen, appears to unfit manganese for taking a prominent part as an organismal metal. It does occur in minute quantity in the animal body along with iron, as if to supplement it, but it is more abundant in the spent tissues than in any of the fluids that take part in the vital functions.† It appears indeed to be hurried out of the system in virtue of the great mobility of its compounds.

The two metals which most resemble iron are cobalt and nickel. They produce oxides similar to those of iron, and are strongly magnetic. Their affinity for oxygen, however, is less than that of iron, for they remain untarnished where iron rusts. They also dissolve more slowly than it in dilute

* Lehmann's Physiol. Chem. Cav. Soc. Trans. vol. 1, p. 449.
† Op. cit. p. 448.

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acids. Their higher oxides are not basic. Their peroxides have not the stability of the peroxide of iron, nor, so far as appears, do they possess the attraction for organic matter which belongs to that body; neither do they form a sharply defined intermediate oxide, like the magnetic oxide of iron. They would not, then, if substituted for iron in the living organism, equal it in power, nor do their properties appear to suit the wants of the body better, or indeed so well as those of iron do. Yet they resemble iron so much that we can well suppose conditions of the system, in which they might be serviceable, and my colleague in the university, Professor Simpson, has long been in the practice of administering salts of nickel in those diseases which are accompanied by a deficiency of red globules in the blood. In such cases iron is generally administered, and often with marked utility, but sometimes it is of no service, and then nickel is often beneficial. Dr. Simpson called my attention to this fact more than two years ago, simply as an experiential result, and not as reached through any such theory as that followed above.

The fact is on this account the more interesting to me, and my colleague's anticipation that the blood, if rigidly analyzed, will be found always to contain nickel, may be confirmed; although, on the other hand, it is quite possible that there may be abnormal conditions of the system, where a metal of the iron group may be more useful than iron itself, not to the extent of its similarity, but of its dissimilarity to that metal; as manganese for example, where the metamorphosis of tissues is too slow; aluminium where it is too swift. It may be thus that nickel, as well as cobalt, proves serviceable as a tonic; and in that case we should not expect to find them among the normal ingredients of the blood.

Iron then is a unique metal. We could replace it by no other without a sacrifice of properties which are serviceable to the higher organisms. More than this it might be unreasonable to affirm. But there is one feature of its uniqueness which is worth a moment's further consideration. Except nickel and cobalt, it is the only decidedly magnetic metal, and it is more magnetic than they. It must influence the body in virtue of its magnetism in a way no non-magnetic metal could, and its magnetic condition must be continually altering. The patients of Reichenbach may sometimes have deceived themselves, or him, or both, when they declared that their sensations were different, according as they lay along or across the magnetic meridian; but it is certain that

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the iron in our bodies must be in a different magnetic condition in the opposite positions, and it is reasonable to suppose that some persons may be sensitive enough to appreciate the difference. At all events, the observations of Faraday on the magnetic condition of flesh and of living animals, demonstrate that the organismal iron is magnetically active. We know also that magnetism cannot be developed without a simultaneous development of electricity, so that magnetic changes in the ferruginous blood and flesh must be accompanied by electrical changes. Electricity also invariably develops magnetism, and we know that electrical currents are constantly traversing the muscles and other organs. Such currents will react on the magnetic masses in their neighborhood and be reacted on by them, with a corresponding exaltation of the intensity alike of the electricity and the magnetism.

Further, the peculiar force or polarity which acts along the nerves resembles in many respects electrical and magnetic force. It is probable that all three forces or polarities powerfully influence each other, and that the magnetizable iron of the body is continually taking part in such reciprocal actions. If, moreover, the iron in the blood vessels, as has been suggested previously, becomes magnetic oxide at each half revolution of the blood, it will be much more magnetic at each of the great crises of the circulation than at any other period. I feel at least assured that the magnetic qualities of iron are among its organismal virtues, and that copper, for example, however suitable otherwise, could never perfectly replace iron, inasmuch as it is devoid of all but traces of magnetic power.

Such is an endeavor, most imperfect and inadequate, to exemplify one mode in which we may hope to discover why living creatures consist of certain chemical substances rather than of others. I ask for an indulgent estimate of a method of research in which I have scarcely a predecessor; but I submit to criticism examples of the method, because I believe it to be logically free from objection. It only assumes that whatever properties a chemical element possesses before its entrance into an organism, it retains after its entrance. Thus, if iron be crystallizable, magnetizable, electrifiable, oxidable in various degrees, and ready to unite with organic matters out of the body, I assume that it will continue to exhibit those properties within it, whatever may be the additional properties which it manifests in virtue of its being placed in such new conditions as can be realized only in a living organism. When we examine substances in a per-



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fectly dark apartment we discern no color in them, but when we carry them with us into a lighted room, and perceive the tints which they then display, we do not doubt that they retain all the properties which they exhibited in darkness; and that these moreover are closely connected with their assumption of color when light falls upon them. We make a similar but not less legitimate assumption, when we take for granted that all the properties which exist in an element when part of a dead mass, remain in it when part of a living one. Such a mode of enquiry, accordingly as I have suggested, may be prosecuted equally well under the guidance of almost any hypothesis, or theory of life, or without hypothesis or theory at all. And it cannot fail to yield important results.

The careful study of each of the chemical elements with a view to ascertain why it is suitable or unsuitable to become a component of a living organism, may often enable us to anticipate physiological discoveries; as conversely the careful study of the molecular changes which occur in living organisms, may enable us to anticipate chemical discoveries in reference to inorganic bodies.

It has always seemed to me very remarkable that the sciences which are mutually dependent, should so rarely be found furnishing each other with principles which can be used deductively as organons of discovery. The chemist, for example, might have said to the physiologist, I find, from my experiments on phosphoric acid and its salts, that it is so unique in its conjoined mobility, stability, and manifold mutability, that I predict you will find it largely present in organisms, and taking an active part in their most characteristic metamorphoses. Or the physiologist might have said to the chemist, I find this phosphoric acid so universally present in the organs of the living body, assisting in functions so different, and accommodating itself to changes of condition so great, that I am certain if you examine its inorganic compounds, you will find them unlike those of any other acid, much more numerous, and very dissimilar to each other.

To take another example. The fact of but one set of tubes being provided in our bodies to convey air to the lungs and from the lungs, and the fact that gases, irrespective of chemical affinity and of difference in relative density, rapidly intermingle and exchange place, stand in direct connection with each other. The natural philosopher might have said to the physiologist, I find that a peculiar diffusive force comes into play when unlike gases meet each other, so that in a

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way liquids cannot do, they exchange places with great rapidity, and pass in opposite directions along the narrowest tube. I predict, accordingly, that though one set of vessels may be provided to carry blood to the lungs, and another to carry blood from them, a single set of tubes will be found all that is provided to carry air to and from those organs, and one channel will prove to be sufficient for inspiration and expiration. Or the physiologist might have said to the physicist, I find living organisms inspiring and expiring through a single canal, which, moreover, in many of them is a tube with rigid walls: there must, therefore, be an unsuspected power of intermingling, and exchanging places on the part of gases, which, if you seek for, you will certainly find. The physiological and the physical fact, however, were discovered independently.

Occasionally we have seen one science assist another in the way suggested. Thus the optician, especially after the invention of the telescope and of spectacles, pressed upon the attention of the physiologist that the living eye must possess the power of adjusting its focus to the vision of objects at different distances. And after some two centuries of unsuccessful endeavors to solve the problem, but not without the discovery of many important truths, in their efforts at its solution, the physiologists of our own day have within the last three years justified the optician by solving the problem, and have added largely to the wealth of their own science.

If there are few such cases, it only shows how much more difficult it is to reason deductively than inductively, and how very rarely man can look down from a point of view, even faintly approximating to that at all times occupied by God, and see a law go forth to its fulfillment.

And therefore before seeking to reach the last conclusion to which our method of enquiry may lead us, I would pause to notice the lesson which it teaches of humility and patience. Kepler, the astronomer, when he could not convince his contemporaries that the laws which he had announced as presiding over the movements of the heavenly bodies, did actually exist, nobly consoled himself with the reflection, that if God had waited some six thousand years before he could find one man to believe that He had impressed such laws on the planets, Kepler might well wait one year before blaming his fellow men for not believing him. If God, in like manner, has waited, not thousands but millions of years, before a very few of his children have studied his works, so as to learn, even most imperfectly, why he made them and their

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Pre-Adamic ancestors of one kind of dust rather than another, we need not boast of the little we know, or angrily complain, because our small discoveries about fluorine, or the like, do not seem to others quite so wonderful as they do to ourselves.

With no desire, accordingly, to be dogmatic, or to press for a verdict in favor of my conclusions, I refer to the truths (in so far as they are truths) expounded in the preceding pages as *illustrations*, not *demonstrations* of final causes. To a belief in these no man can compel another, and I would not compel another even if I could. I blame no man for disbelieving them; but I should be glad to secure for all, the happiness which faith in them begets. The doctrine of final causes is at present in disrepute in many scientific quarters, and this can neither be wondered at, nor in many cases much condemned. There have been so many unwise endeavors to sustain this doctrine, by arguments of less than no value, that it has been unavoidably discredited and despised.

All lovers of truth will join in protesting against making a search for final causes, the chief object of scientific enquiry. We are certain to be misled if we do. There are idols of the church, as dangerous as those idols of the den or of the market place against which Bacon so specially warns us. But when guided by the *Lumen Siccum*, which a desire for the simple truth supplies, we have patiently and honestly reached a result, and then find our hearts swelling with rapture at the wondrous example which it affords of God's wisdom and power, we are traitors to ourselves and to our maker if we refuse adoration.

I believe that few honest intellects and hearts can come face to face with such truths as I have most imperfectly detailed in these pages, without in the beginning feeling a great doubt of their reality, and in the end a great faith in them; and I know that, like St. Thomas of old, they will first stand up, and thrust their fingers into the nail-marks on the palms, and their hands into the hole in the side; but by and by they will kneel and say "My Lord and my God!" If some are faithless, I will ask them to look at the Great Panorama with beating hearts, as well as with eager eyes, and I will simply sorrow for them if they think to measure the universe by the intellect and the senses.

I follow, with unbounded delight and gratitude, though it is at a long distance, the footsteps of the great Philosopher Humboldt, when he goes before me round the vast Cosmos, and with infant-like simplicity shows me every known fea-

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ture of universal nature, without speculation on its purpose or cause. But I have no sympathy with the Man Humboldt when he tells me that our most reverent demeanor towards God, is that of not pretending to discover purposes of one kind or another in any of his works; so that we should imitate the ancient Egyptians who showed their special reverence for Osiris by never naming him. The only attitude that befits us as men, after traversing a mere fraction of the Cosmos, is that of kneeling worshippers.

Nor need we be ashamed to be seen on our bended knees, because Final Causes are so often foolishly dealt with by their admirers. They always will be by a large class. Few realize what the words Final Cause mean. To demonstrate the full reason or entire Final Cause, why one element, such as iron, exists in the body, would demand a perfect acquaintance, not only with all the properties of that element, but with all those of every other element which is also present in the body; besides an acquaintance with much else: and how little do all the chemists of the world know even of a single element?

The sagacious old alchemist, Basil Valentine, in his famous Currus Triumphalis Antimonii, in which he has triumphantly ridden down to the present day, and is likely to ride for many a day to come, declares that "no man knows all the virtues of antimony."* With what astonishment would Basil, if he could revisit the earth for half an hour, hear of antimonious, antimonic, and metantimonic acids; of antimoniuretted hydrogen, penta-sulphide of antimony, stibio-methyle, stibio-ethlye, and the like. The coaches of his day did not differ more from the railway carriages of ours, than his "Currus Triumphalis" does from such a Triumphal Chariot of Antimony as Hofmann, if he chose, could mount upon literary wheels at the present day. Yet Hofmann would find no better motto to put upon the panel of his chariot than Basil's words, "No man knows all the virtues of antimony," and I may add, no man ever will; nor is the chemist better off in respect to other things than he is in respect to Valentine's favorite metal.

What we call a Final Cause, is not God's final cause, but

* Basil's own words, as given in the quaint translation printed in London for Dorman Newman at the King's Arms in the Poultry, 1678, run thus: "Antimony, like unto mercury, may fitly be compared to a round circle, of which there is no end; in which the more diligently a man seeks, the more he finds, if process be made by him in a right way and due order. Yet the life of no man is sufficient for him to learn all the mysteries thereof."—*Basil Valentine, his Triumphant Chariot of Antimony, with Annotations of Theodore Kirkringius, M. D.*, p. 19.

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only that small corner of it which we can comprehend in our widest glance. The fragmentary corner fills our intellects, not because it is vast, but because they are small, and we find how small they have made it, the moment we try to make the fragment a measure of infinite wisdom. The wisest of us is but a microscopic shell in the ocean of omniscience, and when left on the shore with a drop of its waters in our cup, we cannot reflect in its tiny mirror more than a drop's worth of the meaning of the universe. And yet we speak as if out of that drop the whole universe might arise! Men of cold, logical intellect have so fully realized this, that on all hands they remind students of science that Bacon declared final causes to be sterile, comparing them to nuns or vestal virgins dedicated to God.*

I accept Bacon's statement, and still more his comparison. He is held by most who quote his famous condemnation of Final Causes to have pronounced them *essentially* unfruitful; but if he did not intend simply to signify that they are unfruitful *to man*, he could not have chosen a comparison better fitted to signify an unfruitfulness which was of extrinsic, not intrinsic origin.

Final Causes are sterile, not merely like as, but for the same reason as, the vestal virgins were, namely, because they belong to God. These virgins, as well as others, might have become mothers; but no man dare wed them, for they were God's brides. Neither can any man mate with Final Causes: they will bear no offspring to him. And exactly for that reason are they the most perfect of earthly witnesses to the being and perfections of God. Gentle, solemn, and beautiful, they attract men, and modestly permit them to look on their features; but awe mingles with admiration

* "Nam Causarum Finalium inquisitio sterillis est, et tanquam virgo Deo consecrata nihil parit."—*De Augmentis Scientiarum*, lib. iii, cap. v. Since writing the text, I find that in the elaborate edition of Bacon's works, of which the first volume has just issued from the press, under the editorship of Messrs. Spedding, Ellis and Heath, this passage is commented on as follows: "No saying of Bacon's has been more often quoted and misunderstood than this. Carrying out his division of the Doctrina de Naturâ, which, as we have seen, depends upon Aristotle's quadripartite classification of causes, he remarks, that to Physica corresponds Mechanica, and to Metaphysica, Magia. But Metaphysica contains two parts, the doctrine of forms and the doctrine of final causes. Bacon remarks that Magia corresponds to Metaphysica, inasmuch as the latter contains the doctrine of forms, that of final causes admitting from its nature of no practical applications. "Nihil parit," means simply, "non parit opera," which, though it would have been a more precise mode of expression, would have destroyed the appositeness of the illustration. No one who fairly considers the context can, I think, have any doubts as to the limitation with which the sentence in question is to be taken. But it is often the misfortune of a pointed saying to be quoted apart from any context, and, consequently, to be misunderstood.

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in the gazer's heart, and the ever-burning fires on the vestal altar forbid all close or impious approach. Nevertheless, we must seek after, and love Final Causes, even with a lover's passion, although in this life they never can be ours. An irresistible impulse compels us to cling to them. It would be a proof of insanity if we were only mortals; as would also be that attempt to be omniscient, which is the constant, though often unconscious aim of every student. But both are the most natural and irrepressible instincts of immortals, who look forward, through God's mercy, to all eternity as their time of studentship, and to all His Infiniteness as the object of their study. For such the contemplation of Final Causes will never end, any more than it will ever beget satiety. G. W.

# CHRONICLE OF MEDICAL SCIENCE.

## MEDICAL PATHOLOGY AND THERAPEUTICS.

1. *On Rickets.* By Dr. Kuttner of Dresden.

Dr. Küttner, whose practical researches on the diet of infants we presented in vol. viii, p. 315, publishes in a recent number of the Journal fur Kinderkrankheiten, the results of his enquiries into the etiology of rachitism, an affection very common in Saxony. In 9000 patients received at the Children's hospital, during twenty years, 1654 were rachitic. The author endeavors to find out the cause of this enormous proportion, but discovers nothing peculiar to the city of Dresden, unless it be that the laboring people generally have the air of persons of feeble constitution. No positive conclusion is reached in regard to the influence of hereditary causes and syphilis. The children of shoemakers (198) and of tailors (162) constituted nearly a fourth of the whole number of patients. Sex has evidently no influence (814 boys, 840 girls). Many of the patients were the offspring of premature labors, or twin births, which proves that original debility predisposes to the disease. Most of the patients were between one and five years of age (358

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between one year and 18 months, 337 were between 18 months and two years, 449 between two and three years); 1,442 or seven-eighths of the whole number were under five years. It would appear that rachitism is developed in boys earlier than in girls; of 187 patients of one year of age, 112 were of the male, and only 75 of the female sex.

The all important question of the influence of alimentation, is of difficult solution. The author gives statistics of the duration of suckling, discusses and compares them, and shows that rachitis is very often developed in infants raised by hand; but that, on the other hand, the long or short duration of suckling exerts no marked influence in the frequency of the disease. It is easy to understand that if the infant is nursed by a mother of poor constitution, it derives no benefit from protracted nursing. The accessory food administered must also be taken into account. The author simply notes that it is customary at Dresden, as elsewhere, to stuff babies with porridge prepared of sweetened farinaceous substances, and that the detestable plan of placing in their mouths a bit of sugar wrapped in a rag, which they suck with avidity to their great detriment, is very common. This miserable practice is a cause of that acidity of the primæ viæ which predisposes to rickets. Moreover, the children of the poor are fed on bread, coffee, potatoes and other indigestible vegetables, from which result flatulence, acidity, tumid belly, irregular dejections, and imperfect nutrition.

The author examines into the question of vaccination, which has been accused, among other enormities, of inducing rickets and scrofula. Of 1,285 rachitic children, 759 had not been vaccinated, 35 had had small-pox, 491 only had been vaccinated.

As to temperature, Dr. Küttner confirms, by figures, the prevalent opinion that winter is favorable to the development of rachitis, and that the summer heats diminish its frequency. But cold and wet should not be considered the cause of this difference, so much as the seclusion of children in small over heated rooms, with filth, poor nourishment, and the other attributes of misery, always worse in winter than in summer.

2. *Calcareous Salts in the Treatment of Rickets.*

Dr. W. Budd, of the Bristol Royal Infirmary, states (British Med. Journal, June 1857, p. 514), that he has de-

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rived better results, in the treatment of rickets, from the compounds of lime, than from any other remedial means. In cases short of rickets, too, where children with large heads, tumid bellies, and pasty complexion, whose spines are too weak to support their bodies, who are slow in intellect, and backward in teething, and have reached the age of eighteen months or more, without showing any desire to take to their feet, the beneficial influence of calcareous compounds is equally manifest. In such cases, Dr. Budd gives five or ten grains of phosphate of lime, in chalk mixture, thrice daily, adding a simple chalybeate if anæmia is palpably present. At the end of a fortnight, the improvement of the patient is generally conspicuous. Dr. Budd believes that the deterioration in the teeth of the rising generation is due to the insufficient supply of the inorganic constituents of these organs in the food of children, and suggests that children in cities should be fed, in part, during dentition, on biscuits containing a proportion of salts of lime.

3. *Cod Liver Oil Soap in Chronic Eczema.* By Dr. F. T. Behrend.

Dr. Behrend, one of the editors of the Journal fur Kinderkrankheiten, publishes a good paper on the management of the obstinate eczema of children. He strongly condemns a purely local treatment, especially when the eruption is extensive. He cites the case of a child, who had the arms and head covered with crusts, and who died of meningitis after the application of nitrate of silver to limbs. He mentions another infant, with eczema of the legs, neck, and head, who was attacked with cough and asthma when the eruption disappeared, the asthma ceasing with the reappearance of the eczema.

Notwithstanding these restrictions, Dr. Behrend attaches great importance to local measures, and considers that without them all internal remedies would be unavailing. The aim of the topical treatment should be to remove the crusts and obviate the inflammatory condition of the skin. The crusts may be removed by cataplasms and fomentations. Before poulticing, it is well to bathe the parts with a solution of carbonate of soda, ℥j or ℥ij to ℥viij of water. If the eczema occupies a large surface, it is better to use fomentations, after the following plan: Dissolve ℥j of common potash or soda in water ℥viij, and saturate linen compresses in this solution. Cover the affected parts, and surround the



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dressing with oiled silk. Renew the application every three hours. Where this dressing is inapplicable, because of the locality of the eruption, Dr. Behrend uses cod liver oil liniment, viz: a drachm of carbonate of potash or soda to an ounce of oil. The diseased surface should be painted over morning and evening, being previously washed by the alkaline lotion already mentioned. When the skin is thoroughly cleaned, which occurs in a week or fortnight, though sometimes, not until four weeks, the inflammation should be combatted. One of the best means, consists in the use of an infusion of chamomile with the addition of a little Goulard's extract and acetate of zinc. The author prescribes a drachm each of the latter substances in eight ounces of water, and adds an equal quantity of strong infusion of chamomile. When the skin remains roughened by little tubercles, these should be touched with the caustic pencil. The third indication, to restore the normal tone of the skin, is fulfilled by purgatives, blisters distant from the seat of disease, by alteratives (calomel and antimony), or specific means (iodide of potassium, cod liver oil). The influence of these remedies should be aided by a tonic regimen, sea or country air, and exercise. Special cases may require the use of alum, sulphate of iron or zinc, tar, oil of coco, and other agents that modify the vitality of the skin.

4. *On Lead Colic.* By M. Briquet.

A very interesting communication has been made to the Académie de Médicine, by M. Briquet, physician of the Charité hospital. The object of the paper is the nature and treatment of lead colic. What is the seat of the violent pain which then exists? Is it the digestive canal—the muscles of the abdomen—the diaphragm? Is the spinal cord affected, as Laennec and Barbier admitted? Is the pain purely neuralgic, as maintained by Andral and Grisolle? M. Briquet affirms, from researches made on forty-four patients, that the pain is in the muscles of the abdomen, sometimes in one, sometimes in many. He says also, that there is in some cases a real hyperæsthesia of the skin in the neighborhood of the painful muscles. In some patients, however, the reverse exists: the skin is anæsthetic. He affirms that constipation has no influence whatever on the abdominal pain. He proposes in another paper to relate cases to prove that the application of galvanism to the painful muscles usually takes away the pain at once. We can assert that it

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is perfectly true that the pain may disappear immediately in cases of lead colic, after one application of an electro-magnetic current.

5. *On Obstinate Vomiting.*

Various means have been proposed against vomiting during pregnancy, in hysteria and other circumstances. Several French physicians have lately tried with success in many cases some remedies either too neglected or quite new. During pregnancy vomiting has been stopped by the use of a potion of tincture of iodine (10 drops), iodide of potassium (10 grains), and 120 grammes (4 ounces) of water and syrup. This prescription has been employed by M. Becquerel. A physician of the south of France, M. Bacarisse, has made use of iodide of potassium alone, which he thinks to be more successful than tincture of iodine. Professor Buisson of Montpelier has tried three remedies: tincture of iodine with alcohol (a remedy much spoken of in Germany); iodide of potassium alone, and with tincture of iodine. With the first of these three medicines he has seen an increase of the vomiting; with the second, vomiting has hardly diminished; with the third it has completely ceased. He has made this trial three times. Dr. Martin Magron of Paris has employed successfully dry cupping on the spine, and in a case of obstinate hysterical vomiting he has succeeded at every fit in stopping the vomiting by this mode of treatment. In a case of paraplegia, with convulsive fits and vomiting, he has succeeded a great many times in stopping at the same time the vomiting and the fit, by cupping applied on the spine and slight bleeding.

6. *On the Antiseptic Influence of Chamomile.* By M. Ozanam.

In our sceptical age, we hardly take notice of assertions of practitioners concerning the therapeutical influence of new medicines. This may be right, but when the assertions come from respectable and intelligent men, we must at least take notice of what they say, and try the medicines. These considerations will explain our mentioning here the details of a paper of M. Ozanam, presented to the Académie des Sciences by Professor J. Cloquet. According to M. Ozanam the chamomile (anthemis nobilis) has the power of stopping extensive suppurations, and, sometimes, preventing their ap-

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pearance. The flowers of the plant are employed in an infusion of one-quarter to three-quarters of an ounce for one pound of water, to be drunk every day until the cure be complete. Besides, local applications of a stong infusion must be made on the suppurating surfaces. These applications are not essential, however, as without them the cure may be obtained.

M. Ozanam relates four cases, which certainly seem to prove the correctness of his views. The first is that of a man who had a very extensive erysipelatous inflammation of the face and head. Five abscesses had formed beneath the skin of the cranium, and almost the whole bony surface of the head was covered with pus. There was delirium and high fever. The infusion of chamomile was given, and after a few days, during which the suppuration went on increasing, it began to decrease, and after twenty days the patient was entirely cured. The other cases were as bad, if not worse than this one, and the patients were cured in from three to six weeks. If there is an increase of the suppuration in the beginning, in case that a very strong infusion has been given (one ounce a day), the author says that the dose must be diminished.

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## OPHTHALMOLOGY.

### 1. *Statistical Researches on the Causes and Effects of Blindness.**

Dr. Dumont, for ten years past a physician to the hospice of Quinze-Vingts,† has availed of the favorable opportunities afforded him in this position, to institute an enquiry into the causes and effects of blindness, which must have involved much patient and laborious research.

* Recherches statist. sur les causes et les effets de la cécité. Octavo, pp. 120, Paris. 1856. Chez Labé.

† The hospice of Quinze-Vingts is a Parisian asylum for the adult blind. Three hundred blind persons are received, with their families; if single, they are encouraged to marry. Each pensioner receives 20 sous a day, if unmarried, 26 sous if married, for food and clothing, and 1¼ lb. of bread; they are lodged gratuitously. The children are sent to school, and an asylum is instituted for them in the hospital, where they remain till 14 years of age, and receive three sous daily; their apprentice fees are paid by the establishment. There are besides, 600 out-pensioners of the establishment, who receive from 25 to 50 dollars annually. The hospice was founded by St. Louis, in 1260; the republicans confiscated its property in 1789, and the Bourbons in 1814 restored it.—*Ed.*

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M. Dumont considers that "blindness exists, whenever it is impossible for an individual to engage in work requiring the aid of vision." It is complete or incomplete. "Blindness is complete when the blind person cannot conduct himself in safety (p. 9)." The author confines his investigation to incurable cases of this latter class.

The census of France shows a population of 37,662 blind, or 105 in 100,000 inhabitants. Dividing the empire into three zones, it is found that Zeane's law holds good, viz: that blindness is more frequent in northern and southern extremes, the temperate region of the centre offering the smallest proportion of blind persons. Thus, in 100,000 in the northern provinces, there are 111.5 blind; in the southern, 125.5; in the central, 88.2 only. The elevation above the level of the sea appears, in France, to have no influence on the number of the blind, though it is otherwise in Prussia. Propinquity to the coast, has a great influence; in the maritime provinces (Gironde, Bouches-du-Rhone, etc.) the proportion in 100,000, rises to 192.

In the great centres, contrary to probability, we find the proportion below the mean; it is only 92.6. About Lyons, where there is such a large manufacturing population, it is only 68.

In regard to the influence of social position, a surprising fact is elicited. In the richest provinces, the proportion is 113.3, while in those in which the population endure great privations, the ratio is 112. The difference is slight but still noteworthy.

The census gives no information respecting the influence of sex; but Dr. Dumont finds, at Quinze-Vingts, a predominance in male patients, viz: 1,362 men, 636 women. He considers these numbers too restricted to allow of positive conclusions.

*Varieties of blindness.*—The author classifies blindness, according to its causes, under six heads: Variolous, Ophthalmic, Traumatic, Amaurotic, Cataractous, Hydropthalmic. Of 2,057 blind, the distribution is as follows: Variolous, 262; Ophthalmic, 566; Traumatic, 181; Amaurotic and Cataractous, 1,028; Hydropthalmic and others, 20. Relative to the amaurotic subjects, we find an interesting remark, viz. that many amaurotics experience intense photophobia, which is in favor of the modern doctrine which locates this phenomenon in the fifth pair.

The researches of Dr. Dumont contradict some established opinions relative to amaurotic blindness. We find in all ophthalmological treatises, that the professions requiring close

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attention to minute objects, (jewelers, watch-makers, etc.) or which expose the eye to great heat, (glass-blowers, founders, etc.) furnish a large proportion of amaurotic cases. Dr. Dumont tells us (p. 58) that of 478 amaurotics, the engravers, jewelers and watch-makers together numbered only four, and the locksmiths, forgers and blacksmiths together only 18, and that there was not a glass-worker in the whole number. The author's statistics would indicate that exposure to solar light has more influence in the production of amaurosis than exposure to artificial light. Of the 478 amaurotics cited, 27 were masons or stone-cutters, 33 day laborers, farmers, or vine-cultivators, 14 coachmen, 33 gendarmes or game-keepers; in other words, the out-door professions furnish the largest proportion of amaurotics.

Congenital blindness is the rarest of all; but hereditary causes were apparently influential in 22 out of 98 cases of amaurosis. Such is a sketch of the principal statistical results of M. Dumont; we must refer the reader to his book for details.

## 2. *Moorfields Ophthalmic Hospital Pharmacopœia.*

We have extracted from the pharmacopœia of the Moorfields ophthalmic hospital a formula for atropine drops. It may perhaps suit our readers' convenience if we group together such other formulæ as may seem suitable for quotation, which have reference to this specialty. The following are from the pharmacopœia of the hospital referred to:

*Belladonna drops.*—These consist of twenty minims of the liquor belladonnæ to an ounce of distilled water. Atropine solutions are far more cleanly applications, and, as they keep better, their efficiency is more to be relied on. Atropine may not, however, be obtainable under all circumstances, and recourse must then be had to belladonna.

*Hydrocyanic acid drops.*—Very little efficiency is, we believe, thought to belong to hydrocyanic acid as a topical application to the eye. A formula, however, for drops containing it, stands in the pharmacopœia. It is one drachm of the dilute acid (Ph. Lond.) to seven of water. It is used in cases of irritable ophthalmia, but is rarely ordered.

*Sulphate of copper drops.*—The chief use of the sulphate of copper is as an application to granular lids, and for this purpose the crystal is employed. In this form, we believe, we may write that it still maintains its old reputation, as superior to all of the very numerous caustics which have been

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recommended in the treatment of this troublesome affection. After touching the lining membrane of the lids with the copper, it is a good plan to smear the integument of the lid with a moistened stick of nitrate of silver. The strength of the sulphate of copper drops, which are employed in certain cases of thickened conjunctiva, &c. is two grains to the ounce. These drops are, however, not nearly so frequently used as those of either the nitrate of silver or the sulphate of zinc.

*Bichloride drops.*—These are, like the following, used chiefly in cases of corneal opacity, after the subsidence of all inflammatory symptoms, and with the intention of promoting absorption. Their strength is one-eighth of a grain of the bichloride of mercury to an ounce of distilled water.

*Iodide of potassium drops.*—The strength of these is three grains to the ounce. Their reputation is, we believe, about equal to that of the above, and respecting the efficiency of neither is a very confident opinion entertained.

*Nitrate of silver drops.*—One grain to the ounce of distilled water is the strength of nitrate of silver drops employed at this hospital. These drops are held to be an absolute specific in cases of catarrhal ophthalmia, but are very rarely used in any other form. They will cure also the purulent form, but against it the alum is equally, if not still more efficient. With these two exceptions there is scarcely a form of acute inflammation of the eye in which the surgeons to this hospital do not strongly disapprove of the use of topical stimulants. In cases of catarrhal ophthalmia, on the contrary, so marked is the effect of the nitrate, that constitutional measures are hardly ever thought of. The cure is held to be likely to occupy about the same time that the disease had previously existed, the latter being much more quickly curable if it come under the proper measure in an early stage.

*Alum lotion.*—The strength of this lotion is eight grains to the ounce. It is specific against the purulent ophthalmia of infants if properly and freely used. It is also occasionally ordered in other forms of muco-purulent inflammation of the conjunctiva. A stronger alum lotion (lotio alumnis fortior) has a scruple to the ounce.

*Vinegar lotion.*—This lotion is almost exclusively employed to remove lime from the eye. Its strength is half a drachm of distilled vinegar to an ounce of water. Of course the sooner it is resorted to after the accident the better. It should also be very freely used, the lids being everted, and well washed.

*Lead lotion.*—Two grains of the acetate of lead, dissolved

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in an ounce of distilled water, is the formula for this invaluable lotion. It may be used with the happiest effects in many forms of conjunctival inflammation in which stimulants would be injurious. Very frequently after other lotions have effected a certain amount of benefit, but their good influence appears to have ceased, the use of lead will serve a most opportune purpose. Although the importance of the accident has, we believe, been much exaggerated, yet it is of course desirable to avoid the employment of this salt in all cases in which the cornea is actually ulcerated, for fear of its deposition in the cicatrix. It is to be observed, however, that as a lotion it is not intended to be actually dropped into the eye, but only applied to the lids. This pharmacopœia does not contain any formula for drops in which lead is an ingredient.

*Lead and opium lotion.*—This consists of three minims of tincture of opium to an ounce of the above-mentioned solution of the acetate of lead.

*Lotion and drops of the sulphate of zinc.*—The strength of this lotion, as of nitrate of silver drops, is one grain to the ounce. It is employed in cases of weak eyes, with relaxed conjunctiva, and in those of inflamed lids. At this strength it is a milder stimulant than either the alum lotion or the nitrate of silver drops. When directed to be used as drops, the strength of the sulphate of zinc solution is two grains to the ounce.

*Ointments for tinea tarsi.*—Almost the sole use for ointments in ophthalmic practice is against tinea of the lids. For the treatment of this most troublesome disease, several formulæ are contained in the Moorfields pharmacopœia, most of them having some form of mercurial as their active ingredient. We have the unguent. hydrarg. nitr. dil., the strength of which is half a drachm of the nitrate of mercury ointment to seven drachms of lard; the unguent. hydrarg. mitius, which is a drachm of the nitrate of mercury ointment to nine of lard; the ung. hydrarg. nitrico-oxyd. dil., which consists of a drachm and a half of the ointment of the nitric oxide to six and a half of lard. Of those not containing mercury the compound zinc ointment is the only one; its formula is equal parts of the zinc and compound lead ointments; it is, we believe, very rarely used. The dilute nitrate of mercury ointment is the one which enjoys by far the largest amount of confidence.

Very little, indeed, of special pharmacy is required in the treatment of diseases of the eye. The drugs in more frequent use are very few in number, and its dispensing is mostly

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very inexpensive. Tonics, indeed, constitute almost the only costly ones required, and of these, by the surgeon who thoroughly understands the use of opium, turpentine, iron, and nux vomica, the more expensive may be almost wholly avoided. It is indeed almost only after extractions, in certain forms of strumous ophthalmia in children, and in others of pain in the eyeball, associated with neuralgia in adults, that quinine becomes absolutely indispensable. In the very numerous class of cases in which failing sight is dependent either upon chlorosis, asthenia lactantium, or other source of debility, more may be done by steel and nux vomica, than even with bark. There is nothing in the list of tonics, alteratives, or stomachics in the use of this hospital, which is peculiar, and which may not be well deferred for consideration to another place. We find, however, in the Pharmacopœia, a formula for a

*Tincture of strychnia*, which we may here introduce. It consists of a grain of strychnia, to an ounce of tincture of orange peel. It may be questioned, however, whether this tincture is so efficient in all respects as that of the nux vomica itself, and is certainly not more convenient in use, while much more expensive.

Great praise is due to the medical officers of the Moorfields hospital, on account of their steady adherence to simplicity in prescribing. Of the formulæ in their pharmacopœia, very few, indeed, contain more than two active ingredients, most of them possessing but one; and very rarely, indeed, do the patients' letters exhibit any complicated prescriptions. When opiates are required, the liquor opii sedativus is usually preferred, as being at once more efficient, and less likely to disagree with the stomach than any other. This drug is largely used in cases of strumous ophthalmia in children, properly reduced in dose, being not more prone to disagree, while much more reliable than either tincture of hyoscyamus or paregoric. Diarrhœa is held to be one of the main indications for its use, and if the bowels are constipated it is never given, at least until free purgation, by scammony and calomel, has been first effected. In cases in which the intolerance of light is great, the bowels irritable, and the child very restless, a full opiate at night, with bark in the day, is often very quickly effectual. The form of bark usually prescribed to children is the liquor cinchonæ, prepared by Battley, but for adults quinine itself is held to be much more efficient. The chlorate of potash in full doses, as an alterative saline, in certain cases of pustulo-strumous ophthalmia, has recently come into much favor.



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A detailed examination is, however, being made as to its merits, and as to the class of cases for which it is best suited, and at present it would be premature to speak dogmatically.

3. *On the Formation of Artificial Pupil by Galvano-Cauterization.* By M. TAVIGNOT.

M. Tavignot, after enumerating various circumstances which may render the results of the ordinary operation for artificial pupil unsatisfactory, states that he has been for some time considering the applicability of the galvanic cautery for this operation, and has succeeded in employing it. Its chief advantages are, that the new pupil may by it be established instantly, and without hemorrhage, and that its dimensions and shape can be exactly determined. Being a more simple manœuvre than the tearing through the iris, it is less likely to be followed by inflammatory consequences. Moreover, the aperture can as easily be made in the cases in which false membranes line the posterior surface of the iris, or obstruct its central portion. Thus far he only deems this procedure applicable to subjects who have already undergone the operation for cataract; as in the case of the lens being present its opacity would be induced during the application of the caustic. M. Tavignot prefers Bunsen's pile; and having made an incision at the external circumference of the cornea, he passes in the caustic-rod, directing its platinum ring to the point he wishes to influence, taking care not to cauterize the posterior surface of the cornea, nor the edges of the wound.—*Moniteur des Hôpitaux.*

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## SURGICAL PATHOLOGY AND OPERATIONS.

1. *On the Treatment of Aneurism by Manipulation.* By Dr. GEORGE C. BLACKMAN, Professor of Surgery in the Medical College of Ohio.

This is the third case in which this mode of treatment has been employed. The account of Mr. Fergusson's case, and of Mr. Little's, will be found in our last volume, p. 276.

CASE.—"John A—, æt. 28, a native of England, entered the Commercial hospital on the 7th of April. Four months

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previously, he felt a sharp pain along the course of the femoral artery at the junction of the lower and middle third of the thigh, and for the first time he observed a pulsation in this region. He had worked for many years as a file cutter, and had been accustomed to use a small anvil, which was held between his thighs. A swelling was soon detected, and this continued to increase until the time of his admission. There was a space of about three inches between the upper margin of the tumor and Poupart's ligament, and measured along the axis of the limb, the swelling was five inches at its base. The aneurismal bruit was very distinct, and the pulsations perceptible across the amphitheatre. Compression at the groin caused the tumor to diminish considerably in size, and it would immediately regain its former dimensions when the pressure was removed. The patient complained of numbness and other painful sensations in the knee, leg and foot. As the tumor was daily increasing, and as there was no other indication of disease of the arterial system, I determined to bring the patient under the influence of veratrum viride, in order to subdue the force of the circulation. From the time of his admission he was kept on a low diet, and cathartics were administered. On the 11th, I ordered six drops of the tincture every three hours. On the morning of the 12th, I found that the pulse had been reduced in frequency from 94 to 65. At ten o'clock A. M. of this day, he was brought before the class, when with my thumb I pressed forcibly into the aneurismal sac, for the purpose of dislodging a portion of its fibrinous layers, hoping thus partially to obstruct the artery, and to favor the further deposition of fibrin in the sac. Skey's tourniquet was now applied with moderate force between the tumor and Poupart's ligament. The progress of the case may be learned from the following record, kept by Dr. N. J. Sawyer, the house surgeon:

"At 12 A. M. his pulse being 110, full, strong, and bounding, he was bled ℥ix. Pulse came down to 50, soft and regular, and continued low for several days. (The following are extracts from the Case Book):

"April 13th, A. M.—Suffers no pain or uneasiness at all; slept well last night. Entire limb diminishing rapidly in size. Kept the apparatus tight. General health good; whenever any untoward symptom arose, it was promptly met, and the patient kept in a good condition. At intervals, the shooting pain was felt in the tumor, but it gradually subsided altogether.

"17th.—Prof. Blackman ordered the tourniquet to be

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taken off, the bandage reapplied from the toes, up over the tumor, upon which it was to be tightly wrapped, and the patient to be bled, after which the following was administered: ℞ Antimon. and potass. tart. gr. ¼; pulv. opii, gr. ⅛; Sig.—Take every three hours. Patient's pulse came down to 65, soft and regular.

"19th.—Souffle ceased entirely, but the pulsation continues, though it is very weak.

"22d.—Pulsation in tumor has ceased altogether.

"25th.—Is in fine spirits; has no pain, and wants to walk about; general health very good.

"30th.—Has walked some steps, and complains of nothing but weakness.

"May 21st.—The pulsation in the tumor has never returned. The femoral is firmly plugged as far as the origin of the profunda, and in the popliteal space the pulsation of the artery is hardly perceptible. The tumor is daily decreasing in size, and the patient is anxious to leave the hospital and resume his business."—*Am. Jour. Med. Sci.*

2. *The Treatment of Hydrocele by Substitution.* By Dr. Burggraave.

The author has brought before the Society of medicine of Ghent a new mode of treating hydrocele, which he terms by substitution, and which consists in substituting a hydrocele by diffusion for the hydrocele by effusion. He has already tried this method a dozen times with success.

It consists in making in the tumor a certain number of punctures with an acupuncture needle; a serous thrombus is immediately formed, and at the end of half an hour all the serum has been transformed to the areolar tissue of the dartos, where it is quickly absorbed. The absorption is promoted by means of iodine, either by rubbing in the ointment, or by painting with a watery solution of iodine and iodide of potassium.

The author believes that a radical cure is thus obtained, because the patients operated on have not returned after more than two months. At all events, the operation is harmless, and may be repeated if required.

What justifies us in allowing the possibility of radical cure by this method is, that to obtain such a cure, it is not necessary, as was long believed to be the case, to produce plastic inflammation and adhesion of the laminæ of the tunica vaginalis.—*Jour. de Méd. de Bord.—Dub. Med. Press.*

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3. *On the Treatment of Cicatrices from Burns.* By M. SKEY, Surgeon to St. Bartholomew's Hospital.

On a recent occasion we had an opportunity of seeing the plan adopted by Mr. Skey, at St. Bartholomew's hospital, for removing the contraction of tissues consequent upon a burn. The patient was a little girl (Emma B—, æt. 6 years), the front of whose neck had been burnt some years before, and had so contracted as to produce a number of distinct bands, running from above downwards, without very great deformity. The contraction resulting from the burn was treated, whilst the girl was under the influence of chloroform, by making a number of short transverse incisions in various parts of the cicatrized tissues, which gaped as they were made. This plan Mr. Skey has found very efficacious in some eight cases, all of which have done very well. It has certainly the advantage over dissecting up portions of cicatrized skin, in that there is no danger nor risk of sloughing—an accident which not unfrequently makes a case worse than if nothing whatever had been attempted.

On a subsequent visit, we found these transverse wounds healing well, without any appearance of contraction of the cicatrix. She lay upon a flat bed, with her head considerably lower than the shoulders, and the wounds are dressed with narrow pieces of strapping, so as to approximate the ends of a cut to each other—not the sides—and lengthen out the old cicatrix as much as possible.—*Lancet.*

4. *Dislocation of both Thighs—One into the Foramen Ovale, the other on the Dorsum of the Ilium, with Fracture of the Cervix Femoris.* By J. MASON WARREN, M. D. (Communicated to the Boston Society for Medical Improvement.)

The patient was brought into the Massachusetts general hospital, having been crushed by the giving way of a wooden house, which he was engaged in moving, being struck upon the back as he was making the attempt to escape. The right leg first attracted attention. The thigh was fixed, slightly flexed on the body, standing off from it, the foot presenting nearly forward, the limb apparently elongated. A deep hollow was felt in the region of the trochanter, which had itself disappeared. The man being etherized, and the pulleys adjusted, a gradually increased force was applied to extend the limb. A sheet was now placed under

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the upper part of it, and an assistant, standing on the table, directed to lift the limb. A slight rotation was now made to disengage the head of the bone, and it went into its place without any perceptible noise or action of the muscles.

The right limb being replaced, it was now perceived that the left limb was distorted, and presented all the signs of a dislocation upon the dorsum ilii. It was firmly fixed, shortened, the toes everted and resting upon the upper part of the other foot. The trochanter was prominent, and drawn up from its place to within about three inches of the crest of the ilium. On making an effort to move the limb, an indistinct, but very decided crepitus was perceived.

The pulleys being adjusted, and a fresh dose of ether administered, the limb was slowly and with much difficulty drawn down, a slight rotatory motion being given to it when the head was on a level with the socket. It went into its place with a loud crack, which was heard by all the assistants. The limb now appeared, at first, to have regained its natural condition. As the effect of the ether upon the muscular system subsided, the limb gradually contracted, and the foot became slightly everted. An examination now being made, by rotating the limb, and placing the finger on the trochanter, it was perfectly evident to all present, that there was a comminuted fracture of the thigh bone, passing through the trochanter. The two limbs were therefore confined—the right one by a weight attached to it, and a cradle placed over it. To the left, Desault's splint, as used at the hospital, was applied. In addition to the above injuries, there was a fracture of two or three ribs on the left side.

The best explanation of the appearances offered by the left limb is this. The violent crushing force dislocated the femur, at the same time breaking the neck of the bone. The separation of the parts was not, however, sufficient to prevent them from being replaced, but the fracture was made complete, on the bone being returned to its socket.

The subsequent history of this case is not without interest. The patient, from the time of his admission, had complained of his chest, where, it may be remembered, one or two ribs were broken. Suddenly, one night, great difficulty of breathing came on, and, upon examining the chest, it was discovered that a congestion of the posterior part of both lungs had taken place, such as has before been observed at the hospital, in patients who for a long period of time have been confined on the back, without movement, after serious injuries to the lower limbs. From this affection he very gradually recovered.

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At the end of two months he left the hospital well. The motion of the right limb was natural. The left leg was a little shortened. The motions in the hip-joint were limited; on examination, the trochanter was found irregular at the point of fracture. As it had been thought possible that the head of the femur might have been left on the dorsum of the ilium when the complete fracture of the limb took place, search was made for it, but it could not be found there.

In this connection, Dr. Warren mentioned the following case of dislocation, and which was interesting in a practical point of view. A man was brought into the hospital with a dislocation on the dorsum ilii, which was caused by a wagon passing over him, the limb being at a right angle with the body. Ether was given, the pulleys applied, and the dislocation reduced. On raising the limb slightly, to examine it, it at once slipped out of place, and was reduced again with some difficulty. This experiment was once or twice repeated, with the same result. Dr. Townsend, who saw the man, verified the fact. Slight, though not very marked crepitus attended the movements of the joint. From fear of displacement, and with the idea of fracture of the edge of the upper and back part of the cotyloid cavity, the limb of the patient was kept rigidly confined in Desault's apparatus, and his desire to return home resisted. The precautions taken in this case were afterward shown to be not without reason. About three weeks after the accident, Dr. W. being out of town, the patient got out of bed, and while resting on the injured limb, attempted to turn around, thus giving a slight twist to the hip-joint. The bone immediately slipped from its socket. This accident afterward, in the course of the next week, recurred a number of times from simple motions made by the patient while in bed. It was then determined to put on a permanent splint, and allow it to remain on for several months. This had the desired effect, and the patient was seen by Dr. W. some months after leaving the hospital; the joint was then slowly regaining its mobility.

5. *Successful Cæsarean Section.* By W. F. McLelland, M. D. Iowa. (Communicated for the Boston Medical and Surgical Journal.)

On the morning of the 9th of November 1857, I was sent for to attend Mrs. Mullen, aged 30 years, and who was in labor, being at full term. The pains recurred at intervals of about ten minutes.

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A vaginal examination was attempted, but could not be satisfactorily made on account of an obstruction which the finger encountered, about one inch from the vulva. The passage was so much closed that I could not force my finger farther than the matrix of the nail. The character of this obstacle resembled that of the hymen, with the opening in its centre.

I questioned my patient with regard to her previous labor, which was five years anteriorly. She stated that she was five days and nights in labor, and that the child was taken from her with instruments, and by piecemeal. There was severe laceration of the vagina at the time, and this readily accounted for the obstruction, which was the result of adhesion of the torn parts. I now called my partner, Dr. ***, in consultation, and he advised delay until the head should come down and distend the vagina, when the obstruction might be divided. The labor was allowed to progress for eight hours more, when examination showed that the head of the fœtus had not descended at all. I now took a probe-pointed bistoury, the blade being wrapped around, except its terminal inch, and divided the obstructing septum in two places. I was thus enabled to feel the mouth of the uterus, which was dilatable; the fœtal head was found to be pressing firmly against the pelvic bones. The pelvis was very much deformed. The diameters were as follows: antero-posterior, one inch and five-eighths; transverse, one inch and a half; there was very great inward curvature of the sacrum. The rami of the ischia and pubis approached each other so closely that the pubic angle was rendered very acute. The labor-pains continued to be very severe, and had already lasted about fifteen hours. A second consultation with my partner terminated in the mutual opinion that nothing but the Cæsarean section could give the woman any chance. Our conclusion was that the dimensions of the pelvis were too small, not only for instrumental interference by the natural passage, but also for the fragments of the fœtal cranium to pass, had perforation and separation of the bones been practicable. The Cæsarean section was therefore decided upon. The patient was informed that her delivery, in the usual way, was impracticable; and that the Cæsarean section, the nature of which I briefly explained to her, could alone afford either her, or the child, a chance of life. She consented to have the operation done, without a moment's hesitation; and had begged me to use instruments, several hours previously.

The bladder being emptied, and other necessary preliminaries arranged, chloroform was administered by Dr. Grimes,

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whom we had invited to witness the operation. She was placed upon her back, her shoulders being slightly elevated by pillows. I made the external incision in the line of the uterine axis, beginning it about one inch below the umbilicus and carrying it downward to a point two inches above the pubes, in the direction of the linea alba. The length of this incision was about eight inches; and it penetrated through the entire thickness of the abdominal parietes. The wound made in the uterus corresponded with the external one in direction, but was about six inches long. First, a small incision was made into the uterus with a scalpel, and cautiously deepened, making a director of my fingers, instead of a grooved probe. Having completed the incisions, I extracted the child, which cried lustily. The cord was then secured, while Dr. *** removed the placenta. There was quite profuse hemorrhage, at first; and free use was made of cold affusion, by means of sponges, under which treatment the uterus soon contracted, and the bleeding ceased. I then laid the omentum carefully back, brought the edges of the wound together by means of several sutures and adhesive plaster, leaving the lower angle free, and gave an anodyne. The patient rested as well as could be expected, having some after-pains. On the next day, there were no unpleasant symptoms. The pulse was 96; the lochia were naturally discharged through the vagina. On the morning of the second day, the pulse was 106; there was considerable feverishness, great tenderness of the abdomen and tympanites; twelve ounces of blood were drawn, twenty grains of calomel were given, and fomentations applied to the abdomen. About 3 o'clock the same afternoon, there were three discharges from the bowels; the feverish symptoms subsided, the pulse was 100 in the minute, and the patient slept well nearly all night.

On the third day after delivery, milk came freely to the breasts, so that she nursed her child. From that time, she had no unpleasant symptoms, and required no further medical treatment, except an occasional enema, to evacuate the contents of the bowels. During the second week, the wound entirely healed; and during the third week, she was allowed to sit up in bed. In the fourth week, she was up and going about the house, enjoying nearly her usual health; and continues quite as well at the present time.



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6. *Surgical Excerpts.*

*Belladonna in strangulated hernia.*—M. David relates two cases in addition to those that have been already published, in which the administration of belladonna internally was speedily followed by a reduction of strangulated hernia, that just before seemed to call for operation. He gave a spoonful of the following mixture every half-hour: Syrup of orange flowers, ℥j; water, ℥ij; ext. bellad. 4 grs. In one case three, and in the other four doses sufficed.—*Gaz. Hôp.*

*Chloroform as an antidote to strychnia.*—A statement in the American journals having come under the notice of the Austrian minister of the interior, to the effect that chloroform acted as an effectual antidote to strychnia, he directed Professor Pilwax, of the Veterinary institute, to investigate the subject. Accordingly, four dogs were poisoned by strychnia, and when the symptoms had become obviously developed, they were submitted to the influence of chloroform, and the results proved that the chloroform was worthless as an antidote.—*Wien Wochenschrift.*

*Cocoa nut oil ointments.*—The cocoa nut oil is a more eligible body for the formation of ointments than lard, keeping much better, not staining the linen, and admitting of more complete absorption. To render the oil of commerce fit for pharmaceutical employment, it is in general sufficient to liquefy it at a moderate temperature, and strain it through linen. But if it retains its peculiar odor too strongly, and is of too yellow a color, it may be purified by digesting it for some hours in a water bath, with some coarsely powdered vegetable charcoal, and filtering it while warm through paper. The following are some of the formulæ that have been tried with success: ℞ Iod. pot. ʒj, ol. cocos, ℥j. ℞ Ext. bellad. ℈j, ol. coc. ℥iij. ℞ Veratrini, gr. iij, ol. coc. ʒiij. ℞ Sulph. quin. ℈j, ol. coc. ℥j, ol. rosar. gt. x (very useful in ptyriasis capitis). ℞ Chlorof., ol. coc. aa ℥j (of great service in neuralgic and rheumatic pains, rendering the chloroform more fixed, and its action more durable). ℞ Ol. terebinth., ol. coc. aa ℥j. ℞ Hydr. ox. rub. gr. iv, ol. coc. ʒij.—*Omodei's Annali.*

*Lotion for strumous glands.*—The following application neither stains the neck, nor annoys by its smell, while it acts with greater energy than the ordinary iodine ointments: Dissolve ℥j of iod. pot. in aq. dest. and eau de cologne, aa ℥j,

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and spt. vini r. ʒvi. It is to be employed in frictions, morning and evening.—*Ibid.*

*Phosphoric acid in secondary syphilis.*—Dr. Stössel having employed this substance with permanent good effects in three cases, recommends its trial to practitioners, when the employment of the more certain therapeutical agents, mercury and iodine, is contraindicated. He explains its beneficial agency by the fact that in certain cases of syphilis the amount of phosphorus contained in the organic tissues becomes diminished.—*Wien Wochenschrift.*

*Spermatic hydrocele.*—The following are the conclusions M. Sédillot comes to:

1. The name spermatic hydrocele is that which is best suited for this form of scrotal tumor, in consequence of its nature, and the impossibility usually of distinguishing it from ordinary hydrocele.
2. It seems to be dependent upon the obliteration of one or more of the efferent canals of the testis.
3. The presence of a cyst, primarily developed around the effused products, explains the difficulty of the treatment.
4. Whenever the fluid of hydrocele is lactescent it should be most carefully examined by the microscope, and carefully observed in order that pathognomic signs which do now exist may be sought for.
5. The prognosis must be careful, in consequence of the disposition to relapse, and the persistence of a portion of the tumor.
6. The treatment chiefly consists in the induction of active inflammation, and even commencing suppuration within the spermatic cyst, in order to determine its obliteration.—*Union Médicale.*

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## MEDICAL JURISPRUDENCE.

*Account of a Case in which Impalement of the Uterus occurred in the Production of Criminal Abortion.* By F. Broughton, Esq. Civil Surgeon, Kolapore.

This case presents several points of interest. First, as regards the advanced age of the woman, who became pregnant at 50; second, the mode by which death was produced;

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again, from the fact of existence being prolonged for a period of ten days after such violent injury; and lastly, and chiefly, from the discovery by post-mortem examination of the impaling rod in situ.

I will premise by stating, that abortion is frequently produced in this part of India by the introduction of long skewers into the uterus. These rods are not intended to rupture the membrane or injure the fœtus, but are tipped with cotton and smeared with euphorbium, lead, or mercury. Such excitants, carefully introduced, readily produce uterine action, the fœtus is soon expelled, and the mother does not seem, as a general rule, to suffer any permanent injury. It has occurred to me to see many such cases, and these extending over a lengthened period, yet this is the first in which a fatal termination has been exhibited.

I am inclined to attribute the result in this case to accident, the stick probably breaking off in consequence of some convulsive movement of the patient; otherwise we must suppose most cruel violence on the part of the operator. There is yet another way in which it may be accounted for. The instrument may have been clumsily introduced, either by the woman herself or by others, and broken off, and the perforation may have been caused by the contraction of the uterus upon its point after the birth. I am inclined to the latter supposition, and the more especially as the unfortunate woman concealed the fact of mechanical means having been resorted to, although she admitted having taken medicine with a view to the production of abortion.

The history I could obtain of the case was as follows: Nursingna, the deceased, was nearly 50 years of age, and the mother of seven children by her husband, a barber in the village of Kapsee. Two years since the barber died; and the widow having lost her husband, her teeth, and her income, formed an intimacy with a neighboring goldsmith, and pregnancy was the unexpected and undesired result. To obviate discovery and evade the punishment inflicted in this country upon both parties when convicted of adultery, she was, as usual, tempted into the commission of a more heinous crime, and, persuaded by her paramour, to submit to measures for the induction of abortion. Such measures were adopted, and a five months' fœtus expelled. Slight hemorrhage, but considerable pain, followed. This pain, instead of yielding to the usual remedies, increased alarmingly, until a fatal termination being evident, the police authorities sent her into my hospital (a distance of fifteen miles) on the tenth day after her delivery.

Arriving almost in articulo mortis, she died in a few hours,

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and a post-mortem examination was instituted to determine the cause of death.

The body was exceedingly fat, and the abdomen distended. Upon incision, this distention was found owing to an immense quantity of serum, and the bowels, although empty, were swollen and congested.

Bands of coagulable lymph passed in every direction, easily broken through, and therefore of recent formation, but by this means the fiery red intestines were united to the fiery red peritoneum, and the whole mass was firmly glued together. The large red patches, and the minute injection of the smaller vessels, evidenced the most intense inflammation.

Upon lifting up the bowels, some difficulty was experienced in exposing the uterus, and my hand came in contact with a rod, which passing through its fundus projected three inches into the bowels, which were lacerated and hanging upon its extremity.

The other and broken end occasioned the abrasion of the internal membrane, which may be seen at one spot to have proceeded to ulceration. This, doubtless, was the cause of the intense pain experienced in that organ. The uterus was firm, and tolerably contracted, and would appear to have been more passive under such fearful injury than the intestines.

I examined the remains of the fœtus, which were in a state of advanced decomposition, and confirmed the statement as to its probable age.

As to the treatment adopted, I may mention, that although capable of speaking upon her arrival, she made no mention of any violence or accident; her bowels were said to have acted, and she passed urine readily; her skin was cold and her pulse scarcely perceptible.

Ignorant of the presence of a foreign body in the uterus, an opiate with stimulants were the only remedies employed; and I think it is evident that, however well informed I might have been, ten days having elapsed since the introduction of the weapon, that although the instrument might have been withdrawn, the same melancholy termination must have ensued.—*Trans. Bombay Med. & P. Soc.*

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# EDITORIAL AND MISCELLANEOUS.

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## *The Illness and Death of Washington.*

THE anniversary of Washington's birth has been recently commemorated by his native state, under circumstances of unusual interest. Ushered in with the boom of cannon, amidst a splendid display of soldiery, and in the presence of many of the dignitaries of our country, Virginia has inaugurated her tardy tribute to the most illustrious of her sons. Native poets and scholars sound his virtues, and from a distant state, a noble orator journeys, to speak his eulogy, while the sculptor's genius crowns the scene with a wondrous effort, and from the heights of a rocky pedestal, Washington on his war horse in glittering bronze, looks down upon the surging throng who have come to honor his memory.

This interesting occasion has naturally revived in the hearts of the people their attachment and veneration for the Father of his Country. Every incident of his history has been recalled and dwelt upon. New facts of historical value have been developed, and much has been effected towards preserving to all future time, every thing which yet remains tending to perfect our knowledge of the life and character of Washington. As public journalists and members of the Virginia profession, we desire to do our part in this praiseworthy task, and from the columns of a newspaper published nearly sixty years ago, we place on record a concise but deeply interesting sketch of the *last days of Washington*, from the pen "of his compatriot in arms, his old and intimate friend," Dr. James Craik, who passed with him through many scenes of danger, from the bloody day of the Braddock defeat, down to the surrender at Yorktown; and whose sad duty it be-

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came to close the eyes of his beloved chief, mid the quiet shades of Mount Vernon.

This description of Washington's last illness was given to the Alexandria Times for publication immediately after his death; and although frequently alluded to by historians, is not familiar to the public generally. It therefore deserves a prominent place in a Virginia medical journal, and should be read with interest by those, who have been told how a great man lived, and here may learn how a good man dies.

*From, "The Times," a Newspaper printed in Alexandria (Virginia), dated in December* 1799.

MESSRS. J. & D. WESTCOTT—Presuming that some account of the late illness and death of General Washington will be generally interesting, and particularly so to the professors and practitioners of medicine throughout America, we request you to publish the following statement.

JAMES CRAIK.
ELISHA C. DICK.

Some time in the night of Friday the 13th instant, having been exposed to rain on the preceding day, General Washington was attacked with an inflammatory affection of the upper part of the windpipe, called in technical language, cynanche trachealis. The disease commenced with a violent ague, accompanied with some pain in the upper and fore part of the throat, a sense of stricture in the same part, a cough, and a difficult rather than a painful deglutition, which were soon succeeded by fever and laborious and quick respiration. The necessity of blood letting suggesting itself to the general, he procured a bleeder in the neighborhood, who took from his arm, in the night, 12 or 14 ozs. of blood. He would not by any means be prevailed upon by the family to send for the attending physician till the following morning, who arrived at Mount Vernon at about 11 o'clock on Saturday.

Discovering the case to be highly alarming, and foreseeing the fatal tendency of the disease, two consulting physicians were immediately sent for, who arrived—one at half after 3, the other at 4 o'clock in the afternoon. In the interim were employed two copious bleedings; a blister was applied to the part affected, two moderate doses of calomel were given, and an injection was administered, which operated on the lower intestines—but all without any perceptible advantage; the respiration becoming still more difficult and distressing.

Upon the arrival of the first of the consulting physicians, it was agreed, as there were yet no signs of accumulation in the bronchial vessels of the lungs, to try the result of another bleeding, when about thirty-two ozs. of blood were drawn, without the smallest apparent alleviation of the disease. Vapors of vinegar and water were frequently inhaled, ten grains of calomel were given, succeeded by repeated doses of emetic tartar, amounting in all to five or six grains, with no other effect than a copious discharge from the bowels.

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The powers of life seemed now manifestly yielding to the force of the disorder. Blisters were applied to the extremities, together with a cataplasm of bran and vinegar to the throat. Speaking, which was painful from the beginning, now became almost impracticable; respiration grew more and more contracted and imperfect, till half after 11 o'clock on Saturday night, when, retaining the full possession of his intellect, he expired without a struggle.

He was fully impressed at the beginning of his complaint, as well as through every succeeding stage of it, that its conclusion would be mortal, submitting to the several exertions made for his recovery rather as a duty than from any expectation of their efficacy. He considered the operations of death upon his system as coeval with the disease; and several hours before his decease, after repeated efforts to be understood, succeeded in expressing a desire that he might be permitted to die without interruption.

During the short period of his illness he economized his time in the arrangement of such few concerns as required his attention, with the utmost serenity, and anticipated his approaching dissolution with every demonstration of that equanimity, for which his whole life had been so uniformly and singularly conspicuous.

JAMES CRAIK, *Attending Physician.*
ELISHA C. DICK, *Consulting Physician.*

The signature of Dr. Gustavus Brown of Port Tobacco, who attended as consulting physician, on account of the remoteness of his residence from the place, has not been procured to the foregoing statement.

P. S.—The cynanche trachealis has been very general here this winter, in children; mostly confined to infants on the breast. The old Sampson, calomel, was my general and successful remedy, given so as to preserve a laxative state of the bowels. The seneka was also given as an auxiliary; but the syrup of squills, exhibited in such quantities as to produce permanent nausea, and occasional ejection, was preferable. Blisters were applied, though to little purpose. Cataplasms of onions were equally if not more serviceable.

A few years since I dissected a child that died of this disease, and found a firm semidiaphanous membrane attached to the base of the epiglottis, of an inch and a half in length, forming a valve in expiration.

For the purpose of determining whether this membrane was the product of increased secretion, or inflammatory action, I submitted it to a variety of experiments, of which the following are the results:

1. That the membrane formed by the cynanche trachealis is soluble in sulphuric acid and caustic alkaline ley.

2. That it is not soluble in water, as is observed by Dr. Home.

3. Also, that coagulable lymph is soluble in the sulphuric acid and caustic alkaline ley.

4. That on the addition of water to the solution of the membranous matter, or lymph, a partial precipitation is produced; and the addition of alkali to the acid menstruum produced a complete precipitation, and vice versa.

Lastly. From comparing these results with the experiments of the late Mr. Charles Darwin on mucaginous matter, I think we may justly infer, that the membrane is not mucaginous; and e converso, that it is formed of coagulated

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lymph, exuded from the tracheal vessels, and similar to those exudations found in inflamed viscera. The more fluid particles exuded pass off in expiration, leaving the lymph firm, glutinous and membranous.

Mr. Darwin, however, tells us, that coagulable lymph is not soluble in the vitriolic acid. On this account I procured the blood of different persons, and treated it both by affusion and trituration, with the same result. We can scarcely suppose, that there is such an important physical difference between Scottish and American blood; therefore, one of us must be mistaken. My experiments were submitted to several medical gentlemen, who can attest the fact.

In addition to those tests of identity of the membrane and coagulable lymph, may be added the appearances of the internal surface of the trachea. The blood vessels were distended, as if injected, and the intermediate spaces were of a bluish color.

JOHN J. VAUGHAN.

*Wilmington, Jan.* 31, 1800.

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## *State Medical Examiners.*

IN a recent issue, we alluded to various subjects of interest to the profession, which should be urged upon the present session of our state legislature—as for instance, the rearrangement of the system of medical education, the improvement of our method of registration of births and deaths, and the enactment of some law protecting the public from the impositions of quacks and foreign adventurers. We fear that our lawgivers will not devote much time, however, to these truly important topics, and we are therefore thankful to observe any movement, having reference to the improvement of the medical interests of the state.

Below we publish a bill to provide for the establishment of a board of medical examiners for the state, which has been reported in the senate. This action we probably owe to the energy of our esteemed friend and collaborator, Dr. Claiborne, the senator from Petersburg; and although it is not possible that such an enactment will be made during the present session, it is certainly important that the medical public should take the subject into serious consideration.



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We publish the proposed bill without further remarks, designing hereafter to express our views on the question at some length.

*A Bill to provide for the Establishment of a Board of Medical Examiners.*

1. Be it enacted by the general assembly of Virginia, that from and after the day of 1859, no person shall be allowed to practice medicine, or surgery, or any of the branches thereof, or in any case prescribe for the cure of disease for fee or reward, unless he or they shall have been first licensed to do so in the manner herein after to be described.

2. If any person shall after this date presume to practice medicine, surgery or any of the branches of either, or in any manner to prescribe for the cure of disease for fee or reward, he or they shall be liable to be indicted, and on conviction fined the sum of five hundred dollars for the first offence, and for the second, five hundred dollars, one-half of the fine to enure to the informant and the other to the treasury of the commonwealth.

3. On trial of all indictments for any of the offences enumerated in this act, it shall be incumbent on the defendant to show that he has been licensed to practice medicine and surgery and to prescribe for the cure of disease in the manner herein after to be mentioned, to exempt himself from the penalties enumerated in this act.

4. All bonds, notes, promises and assumptions made to any person or persons not licensed in manner herein after mentioned, the consideration of which shall be services rendered as a physician or surgeon in prescribing for the cure of diseases, shall, and they are hereby declared to be utterly void and of no effect.

5. In order to the proper regulation of the practice of medicine and surgery, there shall be established a board of physicians to consist of nine members, who shall examine, on the usual branches taught in the schools, all applicants for license to practice; and if on such examination they be found competent, shall grant to such applicants a license or diploma: provided, that seven members of such board shall constitute a quorum: and provided, that four out of the seven be agreed on the qualifications of said applicant: and provided such applicant shall have received a diploma from some chartered or incorporated medical school or college, and shall be twenty-one years of age, and can show evidence of a good moral character.

6. The board of physicians shall be appointed by the governor once in six years, and shall assemble in the city of Richmond for the purpose of conducting examinations annually on the first Monday of May; and said board shall be entitled to receive and demand of every applicant the sum of ten dollars, and for every license the sum of two dollars.

7. The board of physicians shall be and they are hereby authorized and empowered to elect all such officers, and to frame all such by-laws as may be necessary to carry the law into effect; and in case of the death, removal, or refusal to act of any member of said board, the said board, or a quorum of them, shall be and they are hereby empowered to fill such vacancies.

8. To prevent delay and inconvenience, two members of the board may grant

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temporary license to applicants therefor, and make report thereof to their next regular meeting for confirmation: provided, that such temporary license do not continue in force longer than the next regular meeting of the board, and that a temporary license shall in no case be granted by any two of the board, after the applicant has been refused a license by the board of physicians.

9. No member of said board shall be a teacher or professor in any school or college of medicine in the commonwealth.

10. No part or clause of this act shall have any operation or effect upon any person now practicing medicine or surgery in this state, or who has heretofore been a practicing physician within the same.

11. The board shall cause to be entered in a book to be kept by them for that purpose, the names of each and every person they shall license to practice medicine and surgery, and the time of granting the same, together with the names of the members of the board present, and shall publish them in some newspaper in the city of Richmond, within thirty days after granting the same.

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## *The Medical Society of Virginia.*

THE annual meeting of the State medical society will be held in Richmond on the *fourth* Thursday of April, when we may reasonably expect to receive from some of the standing committees valuable reports on the various interesting subjects proposed for their consideration. As the American medical association holds its next session in Washington during the week immediately ensuing the meeting of the society, it is probable that many of the Virginia profession will attend; and the state should endeavor to send to the National medical congress a large and influential representation.

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## *Bricks and Mortar Resurrectionitss.*

THE abominations practiced in London graveyards before the discontinuance of intramural interment were so terrible and inhuman that the mere recollection of them causes a shudder. The fabled Ghoul was a delicate minded gentleman, compared to an old, hardened sexton. The turning up of the bones of the dead as if they were potatoes; the burning of the sodden coffin boards; the human remains piled in festering heaps; the iron bars thrust through coffin lids to test the degree of de-

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composition—all these and other still more disgusting processes were of constant recurrence. And it was with a feeling of relief at having heard the last of such things, that right minded men read the order to close up all city graveyards, to return to the good custom of our forefathers prior to the sixth century, and inter our dead as they did—"farre out of all towns and cities."

Then commenced another abuse. Efforts were made in several directions to build on the disused graveyards. In the crowded cemetery of the chapel in Tottenham-court-road, the whole surface was leveled, and the gravestones taken away without any mark being left to indicate what lay beneath. Further proceedings were luckily stopped. Similar attempts have been made in other parts of London under various pretences. And one of the most shocking of these has been recently brought to light, and will hereafter be made the subject of a trial.

Adjoining to a large chapel in Moorfields is a closely packed burial-ground, now, of course, disused. On such a site the general board of health, for some unexplained reason, sanctioned the erection of a school in connection with the chapel. Accordingly (as the case was stated by the city solicitor), those who undertook the work excavated a portion of the burial ground, removing numerous bodies, and "it appeared that a vast quantity of human bones had been taken away, and sold to dealers in marine stores." Numerous witnesses deposed to the offensive effluvia during this wholesale disinterment. One of them, engaged in building some new houses in the neighborhood, where soil was wanted, stated:

"I have seen a quantity of earth carted there. The man said he had some very good stuff to make mortar of. Several bushels of bones were taken from the earth. Men used to come raking the earth every day for bones, which they took away in bags. I sifted some of the earth myself. Some of the bones were fifteen, sixteen and seventeen inches long. I have also picked up bits of coffin. One old 'chap' who came there picked up a rare big bagful of bones."

Another witness deposed:

"I went to Victoria Park, where I observed some newly removed earth, which was to be used to make the road with. I found a quantity of bones and pieces of coffins. Cloth and lining were adhering to the bones. The soil smelt very offensive."

Dr. Letheby said:

"On visiting the place I found that a number of men were engaged in digging a trench from one end to the other of the graveyard, and in carting away the earth and broken bones which they had taken up. . . . I noticed two heaps of human bones, and on one of them were fifteen skulls, upon which there still remained portions of flesh and hair. . . . I perceived an unpleasant smell. The disinterment of bodies under such circumstances was calculated to be very injurious and dan-

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gerous to the public health. It appeared to me that two or three feet of earth had been carted away from the surface at the back of the grave-yard. . . . I found in the general vault under the chapel, immediately on the inside of the opening, thirty-seven coffins piled up on each side of the way. I had the lids, which were fastened, lifted from some of the coffins, *which were of wood*, and contained bodies in a state of decomposition."

What must be the condition of the air of a chapel beneath which lies such a festering heap of human remains, with no other enclosure than wooden coffins?

The description given was illustrated by a large bag of decomposing remains brought into the police court, where the odor was so overpowering that they had soon to be hauled away by two policemen. Well might the magistrate have exclaimed with Hamlet, "Did these bones cost no more the breeding but to play at loggats with them?—mine ache to think on't." For all these proceedings, of course no one was to blame—the old story. But the facts detailed prove what amount of respect is likely to be paid to the dwelling-places of the dead, unless some stringent law be passed to inhibit their being in any way disturbed for building purposes. The ground they occupy is not large, and the spaces thus left free are clear gain, now that burials have ceased, to busy dwellers in the closely-pent houses surrounding these homes of the dead—these little oases of rank green grass, where,

> "In the heart of the city, they lie, unknown and unnoticed;
> Daily the tides of life go ebbing and flowing beside them:
> Thousands of aching brains where theirs no longer are busy—
> Thousands of toiling hands where theirs have ceased from their labors—
> Thousands of weary feet where theirs have completed their journey."

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## "*Faciem in Unam Nascuntur Olivæ.*"

It is recorded by a contemporary, that the triumphal entry of Van Amburgh into Hounslow with four milk-white steeds, was followed by the premature birth of Albino children. Legendary fishwives, frightened by mermaids, have miscarried with amphibious monstrosities (the signs of pregnancy being, of course, the Virgin and the Scales). And such recorded marvels are almost equaled by a matter of fact story communicated to the president of the Linnæn society, by Dr. Guy, of King's college, and printed in the recent volume of "Transactions."

"A turner of the name of Ford, employed by government to turn several thousands of round rulers for the army in the Crimea, presented himself in the laboratory of King's college one day, in great distress. He was called upon to attend a funeral, and was scandalized at his

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somewhat ridiculous appearance, in consequence of the curious green tint of his hair. His head was washed with all the common reagents, but without effect. Being informed of this curious fact, and being interested in it, as having some sort of bearing on the question of identification, I called on Mr. Ford, and found him in the state described. His hair, which is naturally a light chestnut, was changed, except towards the roots, of a bright yellow green, with a very decided and curious green tint. His children, whose hair is of a like tint, were similarly affected. He told me that his hair and that of his family had always been affected in the same way when engaged in turning rulers from the wood known as *green ebony*—a wood, as he says, generally used for that purpose. His wife's hair, which is black, is not subject to any change. The exposed parts of the skin undergo the same change of color, as does the urine. He also told me that one of his children was born with a very remarkably deep-green tinted skin, which disappeared in time."

We regret that the details of the case are not still further complete, so as to inform us whether the whiskers and eyebrows underwent the same curious "yellow-green change." If this information be supplied in a future paper, we should be glad at the same time to hear something more of the reptilian infant "born with a very remarkably deep-green tinted skin, which disappeared in time." This acuticular phenomenon is certainly unique and curious. "I'faith, a most delicate monster, and a present for any emperor that ever trod on neat's leather." The motto of the paper might be, "Fronde virere novâ et croceo fœtu."

Not the least remarkable feature in this strange history is the incidental reference to the origin of the phenomenon in the man turning "several thousands of round rulers for the army in the Crimea." The potential relation of the wooden rulers of England to the Crimean army is not foreign to the teachings of our previous experience. But the number of these rulers is even more surprising than their infectious viridity. What were the army to do with them? Were they intended to be employed in drawing military lines? Did they foreshadow future raps over the knuckles for incapable generals? Were they intended to take the place which the marshal's baton is said to occupy in the knapsack of every French soldier? Or were they despatched for the use of the fleet and the naval brigade to aid Britannia in her appointed task, and assist her in ruling the waves?

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## *Spontaneous Combustion.*

A CELEBRATED novelist, in a recent work, supplied the *gobemouches* of the reading world with an interesting topic for their mental digestion, to wit, an instance of spontaneous combustion of the human body. The

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author condescended to explain that he was not joking at the time, but really meant the thing in earnest, and himself believed the gruesome story. The joke has since become too stale even for the reader of light literature, who, like a trout, is only tickled once to any effect by the same titillator. But such a "property as spontaneous combustion was far too valuable to be lost, and so, forsooth, it has turned up again. Where? Not at the Surrey, not at the Egyptian hall, not at a teetotal abstinence jubilee, not edited by the Wizard of the North, nor by the "Physicien" of the Empress of Russia, but—in a solemn conclave of medical men. Minerva has, doubtless, wiped away a tear from the corner of her celestial eye with her ambrosial kerchief, and now smiles incredulous at the tale of folly; but the fact remains—*malgré* the tears or smiles of the tutelary goddess.

For a case was brought before the Pathological society the other day in which, at the autopsy, five ounces of oil escaped from the pleura when opened. The history of the autopsy appeared defective. Dr. Barclay related the case, but like Herodotus, wisely warned his hearers that he only recounted what he was told, and didn't speak from personal inspection. Dr. Bristowe carefully suggested that the oil was the product, or consequence, rather, of decomposition. This sober explanation—doubtless the correct one—was, however, objectionable, because it spoilt a good tale. A gentleman, therefore, of a romantic turn of mind, enquired whether any trials had been made of the inflammability of the oil? and whether this might not have been a case which would have ended in spontaneous combustion?

Now, if the enquirer of a romantic turn of mind meant this for a joke, we must say that he should have played it off at some other place than the Pathological society, a body whose business is with sober facts and not with tales of mystery. He should have been aware—Firstly, that oils—whale oils, for example—are ordinarily inflammable, and are frequently used by ingenious people for the purpose of lighting their rooms, lobbies, &c.; and secondly, that in the only authentic case of spontaneous combustion recorded in this country, no post-mortem examination was made, nor was any analysis of the individual's fat made previous to his ignition. As it is impossible, therefore, to arrive at any conclusion by comparison of the oily case which didn't ignite with the case which did ignite, (according to the novelist,) but wasn't known to be oily, the suggestion of the romantic enquirer must remain suggestive still.

We much regret that such a fabulous history should ever have been alluded to in such a society, and heartily thank Dr. Brinton for not allowing the occasion to pass without observing, "that he had certainly hoped never to hear the subject of spontaneous combustion mentioned before such a society, since the idea had long been abandoned by all medical jurists worthy of the name."

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# VARIETIES.

## *Medical News and Items.*

POLYSARCIA.—An Italian priest, who rejoiced in the name of Paolo Moccia, is reported to have weighed less by 30 lbs. than his own bulk of water, and therefore could not sink in that fluid. He was water-proof, as light as a cork, and could not drown.

M. Blainville is reported to have remarked, after a tour across the channel: "We have seen many individuals of the English nation whom embonpoint had rendered almost monstrous; and I remember, among others, a man exhibited in the Palais Royal, who weighed 500 lbs. He was literally as broad as he was long." From the correspondence of weight, the fat man here alluded to must have been Mr. Bright, a tallow chandler and grocer of Malden in Essex, who died in the 29th year of his age. Seven persons of the common size were with ease enclosed in his waistcoat, and a stocking, which when sent home to him was found too little, was large enough to hold a child four years old. Mr. Bright was esteemed an honest tradesman and a facetious companion. He was comely in his person, and affable in his manners. Heavy though he was, he fell short of the weight of Daniel Lambert, who exceeded him by 10 stone, and died after living through 40 years, leaving behind him the posthumous fame of being the most ponderous or colossal man that has been ever authentically known. In him mice might possibly have nested, if it be true that a Bishop of Mentz, or as Hudibras has it:

> "A Saxon duke did grow so fat,
> That mice (as histories relate)
> Ate grots and labyrinths, to dwell in
> His postique parts, without his feeling."

Polysarcia may be repressed and lessened by systematic exercises—living on sixpence a day and earning it; by sleeping little, and only indulging in food of sparing quantity and a dry kind; by fretfulness of temper, or real anxiety of mind. These will prevent any one from getting fat, and make the fattest man thin. If we are to trust Shakspeare, the great Julius Cæsar had a keen perception of the causes and indices of meagreness. He says to Antonius:

> "Let me have men about me that are fat;
> Sleek-headed men, and such as sleep o' nights:
> Yond' Cassius has a lean and hungry look:
> He thinks too much: such men are dangerous."

Antony, in reply, beseeches Cæsar to fear him not, as there is no reason, and he is a noble Roman; but Cæsar again returns to the charge:

> "Would that he were fatter;"

and so enters on his monologue. Examples of extreme attenuation are now and then observed. An American named Calvin Edson, shown a few years ago, was

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wonderfully emaciated. He weighed but 58 lbs. A Frenchman named Seurat is said to have been considerably lighter than even this. He was exhibited at one time under the attractive soubriquet of the living skeleton. I have not succeeded in ascertaining his actual weight, but he is said to be as extreme an illustration of leanness as can be imagined. He lived upon ℥iij of nourishment daily, comprising a little meat and bread. Neither the American nor Frenchman had any disease. The Frenchman was 30 years old, and had wasted from infancy. The American was 40 years of age, and had been getting sparse for 16 years.—*Wright's Therap. Contributions.*

EDINBURGH CELEBRITIES FROM AN AMERICAN POINT OF VIEW.—Dr. Simpson, a short thick man, with what Gerald Massey calls "body of Bacchus and the head of Jove," really a very fine head, covered with long black curls, seamed with gray, a round Scotch face, high cheek-bones, penetrating mild eyes and curious prim mouth, deep sunk between the nose and chin, like that of Cicero. And there is no reason why it should not, for the doctor, too, is eloquent in his own sphere. He persuades nervous females into good health, and amuses all by his genial humor and stories. He is a bold experimenter, and has hit upon other things than chloroform. Many tales of his benevolence are told. The poor never apply to him in vain. Not a few of his own profession envy him, and assail his reputation for the love of novelties, etc.; while, on the other hand, the disciples of mesmerism and the water cure declare he could say something in their favor, if he had the courage and the good will.—Professor Syme, the first operator alive, is a clean made, gentlemanly man, with a finely formed, baldish head—a most concise, decided individual, sharp, curt, and unceremonious as his own knife, but always going direct to the heart of the matter, never wasting a drop of blood, or a drop of ink, or a single word. He is not much addicted to giving drugs. He likes to see what he is about, and has no fancy for poisoning people at random with the preparations of chemistry.—A colleague of these two, and an opponent of the former in reference to homœopathy, is Professor Henderson, the leader of homœopathic warfare in Scotland, a tall, compact, swarthy, bushy-haired man, dexterous at controversy, and capable of making a clear extempore statement, in a style that many lawyers would envy.—*Scottish American Journal.*

WINTER RETREAT FOR INVALIDS.—Dr. N. D. Benedict has established a sanitarium, with the above title, at Magnolia, Florida; and from the description of the surrounding country, the nature of the climate, and the good character of the physician, we think those who are obliged to seek restoration of health will have every reason to be satisfied with the arrangements, and will derive benefit from a residence at Magnolia.

It will, of course, devolve upon the medical attendants of such persons, to advise them whether a mild or warm climate will benefit them more than a dry and cool one. Those who need the former, it would seem, could not be better situated than at the "Retreat."

Dr. Benedict is well known to professional men, in New York city, particularly, where he at one time held responsible offices with much credit to himself. He also practiced his profession in Philadelphia, and is well spoken of by physi-



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cians of the highest reputation there. Ill health, originally, forced him to seek a more congenial climate, and being restored, he now devotes himself to the management of this institution. We wish him success, and can confidently recommend his establishment. His testimonials are of the highest description.

*Boston Med. Jour.*

Effects of fear.—A Parisian physician, during his visits made in a hired fly, had received a bottle of real Jamaica rum as a sample, but found, after returning home, that he had left it in the carriage. He went to the office, and informed the manager that he had left a virulent poison in one of the carriages, and desired him to prevent any of the coachmen from drinking it. Hardly had he got back when he was summoned in great haste to three of these worthies, who were suffering from the most horrible colic, and great was his difficulty in persuading them that they had only stolen some most excellent rum.

Lead poisoning of lace cleaners.—The death of a young woman at Paris employed in lace cleaning, and in whose viscera after death notable quantities of lead were found, has given rise to an investigation as to the means employed. It has been discovered that soiled lace is cleaned by a process imported from Brussels, and which consists in giving to the flowers a factitious and temporary whiteness by repeatedly dusting them with white lead. All the workwomen employed in fixing flowers so cleaned upon net suffer more or less from the emanations of the lead; and several have been obliged to abandon the business.—*Journ. de Chir. Med.*

How to eat grapes.—When in health, swallow only the pulp; when the bowels are costive and you wish to relax them, swallow the seeds with the pulp, ejecting the skins; when you wish to check a too relaxed state of the bowels, swallow the pulp with the skins, ejecting the seeds. Thus may the grape be used as a medicine, while, at the same time, it serves as a relaxative, unsurpassed by any other cultivated fruit. An adult may eat from three to four pounds a day with benefit. It is well to take them with or immediately after your regular meals.—*Indian Annals of Medical Science.*

Small-pox patients in Prussia.—A curious law suit is going on just now in Berlin. A rich banker of that city, who is ill of the small pox, has had two actions brought against him, one by his barber and the other by his upholsterer, who claim damages because he communicated the malady to them. They demand compensation for the doctor's expenses and the time they have lost. According to the Prussian law, the banker was bound to hang up outside his door a notice with the words, "There is a person here ill of the small pox."

A counterblast for puffing.

(*To be committed to memory.*)

My son each rogue eschew
Of the advertising pack,
He's generally a Jew,
Invariably a quack.

*Punch.*

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VIRGINIA

MEDICAL JOURNAL.

APRIL 1858.

ART. I.—*Rheumatismus Puerperalis—With Cases.* By J. J. THWEATT, M. D., of Petersburg, Va.

UPON no class of diseases has modern research shed more light than upon the class connected with the puerperal state. If we take a retrospective glance at the history of the various diseases incident to this state, we find the utmost confusion, both in their pathology and therapeutics. This confusion may be chiefly ascribed to the fact, that a large majority of medical writers have, until recently, considered all the puerperal pathological states under one head, viz: "puerperal fever." No one fact is better established at the present day than that puerperal fever is a zymotic disease—a blood disease—the phenomena of which is intimately connected with a depraved condition of this fluid; and that the anatomical lesions, which formerly (and even now) were regarded as the cause or causes of the characteristic symptoms, are the effects of this depraved condition of the blood. But our object is not to treat of puerperal fever, nor to defend this opinion, which, we are fully aware, is far from being entertained by the profession at large. We take this brief notice of puerperal fever, and announce the above opinion of its nature simply for the purpose of enabling us to treat the subject of this paper with more clearness.

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That the parturient state, (we employ this term in its comprehensive sense), impresses upon the system a certain peculiar influence—an influence which modifies in a strange manner the diseases to which this state is liable—no one, who has closely observed the diseases of lying-in women, will deny. What is the nature of this influence, no one as yet has been able to give any accurate description. Approaches have been made to it, but they are of too indefinite a character for any scientific reliance to be placed upon them. Though incomprehensible and intangible in its nature, of its existence there can be no doubt. Like miasm, it is a mysterious modifier of morbid actions. We have, then, a variety of diseases connected with the puerperal condition, distinct in their pathology, distinct in their semiology, and distinct in their therapeutics. We have first, puerperal fever, zymotic disease, a disease which we will remark, *en passant*, is rarely seen in this climate. We have puerperal peritonitis, the inexorable atropos of Dr. Meigs, the real puerperal fever of many writers, and a disease frequently met with among us. We have puerperal metritis—an affection of the uterine structure; we have puerperal phlebitis—an inflammation of the veins of the uterus. And lastly, we have, according to Dr. Imbert Gourbeyne, puerperal albuminuria.

The design of this paper is to direct the attention of the profession to another form of puerperal disease, which we denominate "puerperal rheumatism." Upon reflection, it is surprising that no allusion is made to this form of puerperal disease by any writer, ancient or modern—at least, we have not been able to find any description of it in any work on diseases of females. It is true, that mention is made of rheumatism of the womb by many writers, and we have seen many cases of this disease; but, of puerperal rheumatism, as a distinct disease, we repeat, that after the most extensive research, we have found no description. And we would ask, is there any thing calculated to excite skepticism or surprise at this attempt to introduce, into the nosology of

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puerperal diseases, a new disease? If it be admitted that there exists in the puerperal state a certain specific morbid influence, which modifies to such an extent the pathological conditions of that state as to give rise to distinct forms of disease, requiring a corresponding modification in the therapeutic management, why should the lying-in women be not subject to rheumatism, with this modifying influence affecting alike its pathology and therapeutics? We shall, therefore, endeavor to demonstrate—1, that there is a distinct form of puerperal disease, which merits the name of *puerperal rheumatism;* 2, that this disease requires for its management a more or less distinct and specific method.

In the month of October 1856, we were called to see a colored woman, in the sixth day of her confinement. We found her suffering intensely from pain in both iliac regions, which was aggravated on the slightest pressure. Her tongue was heavily coated; pulse quick and irritable; countenance contracted; bowels constipated; body bathed in acid perspiration; says that the pain was more severe at night; womb congested; no discharge; directed thirty leeches to iliac regions, and the following powder to be taken at bedtime: ℞ Hydr. chlo. mite, gr. x; sodæ bi-carbonat. gr. xij; pulv. opii, gr. j. Fiat pulv. 1. M. A dose of oil in the morning. On visiting her the next morning, we found her in a more comfortable condition. The pain was diminished, but still felt on pressure; the oil had produced several bilious evacuations; the pulse quick and irritable; complained of profuse sweats. Directed a febrifuge mixture, and the powder to be repeated at bedtime. On the following day we were summoned at an early hour to visit her. Found her suffering from pain in the right hip and side; the pain was so severe as to cause screams on the slightest movement; the pain in the iliac regions had entirely disappeared; tongue moist and less foul; pulse quick; skin moist; bowels open. On examining the urine she passed during the night, we discovered a thick deposit of lithic acid, and for the first time felt assured of the nature of the

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affection we were treating. Under the influence of local depletion and the administration of the phosphate of ammonia, the patient recovered in a short time.

The second case we met with presented some peculiarities, which rendered the diagnosis extremely difficult.

Oct. 26, 1856.—Visited a negro woman in the tenth day of her confinement. She had enjoyed excellent health during pregnancy; her labor had been easy; and had been well up to the day we visited her, when she was seized, without any ostensible cause, with high fever, headache, hot skin, and abdominal pains; the pain extended from the hypogastric to the epigastric region; she could not bear the slightest pressure—even the weight of the bed clothes was insufferable; the pulse was small, quick and compressible. Notwithstanding these symptoms, she complained of extreme debility; could not sit up or be moved without a tendency to syncope; and her bowels were constipated. We were here entirely at a loss what treatment to prescribe. The general symptoms indicated depletion, yet the pulse and the extreme debility forbade the use of the lancet, or even local depletion to any amount. Under these circumstances, we determined to prescribe warm stimulating applications, a dose of oil, and to wait for further development of the nature of the disease. Visited her again in the afternoon; found her still suffering from pain; the oil had operated; still complained of weakness; the skin was moist, and perspiration was apparent about the head and neck; there was no tympanitis on percussion. We asked for the urine which she had voided during the day. It was highly acid, with a large deposit of lithic acid at the bottom of the vessel.

From the above indications, we came to the conclusion to treat the case as rheumatism, and announced to the patient and her owners, who were very much alarmed about her situation, believing she had childbed fever, which, as Dr. Meigs truly says, "is a word of terror to patient and friends," that she had rheumatism. Directed a continuation of the

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warm applications, and an anodyne at bedtime. The next day we put her on the use of phosphate of ammonia, in 20 grain doses twice a day. Under the influence of this remedy, in conjunction with anodynes and tonics, she recovered. It may be well to mention, in relation to this patient, that two or three weeks subsequent to her attack, she exposed herself a great deal to the inclemency of the weather, and was seized with acute articular rheumatism of extreme gravity.

We will select another case from our note book, in which the disease assumed a milder form, accompanied with symptoms which at first were difficult to comprehend.

About the first of January we were requested to see, in consultation, a young married lady, in her first confinement. She had passed through the parturient process without any difficulty. Some days after her delivery she complained of weakness, with a disposition to syncope on muscular exertion; had night sweats; no pain; would be seized several times during the day with choking sensations and with difficulty of breathing; the pulse quick and weak; after the paroxysms of suffocation she would be calm and free from any annoying symptom: the only pain felt was in the shoulder and hip, which soon passed off; she was subject to rise of fever every afternoon, which passed off in a profuse sweat; the pulsations of her heart were normal; the urine was high colored, abnormally acid, but deposited no lithic acid. After mature reflection on the symptoms of the case, we made the following diagnosis: Rheumatic fever, complicated with hysteria; and in addition to quinine and assafetida, which had been prescribed by her intelligent physician, we advised bi-carbonate of soda, in fifteen grain doses, three times a day; mustard poultices to the chest; and anodyne at bedtime; rich soups.

The above treatment was continued for several days, when all the prominent symptoms disappeared, and we ceased our visits.

During the months of November and December of 1856, and January of 1857, we treated some dozen cases of this

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singular disease; and we learn that many cases were treated by other physicians, but under the name of "puerperal fever."

We will observe, that during these months the weather was exceedingly favorable to the development of rheumatic affections—hence, rheumatisms were rife among the population of Petersburg.

Puerperal rheumatism presents itself in two forms—an acute, and a sub-acute form. In a large majority of cases it makes its appearance suddenly, without any premonitory or antecedent symptoms. The acute form is usually ushered in with an exaltation of the arterial and nervous forces, with flushed face, quick pulse, great excitement, extreme restlessness, acute pain, sometimes headache, but generally the brain does not participate in the morbid derangement; the bowels are almost always constipated, and the skin moist. In the sub-acute variety we have a fever intermittent in its character; a dull heavy pain in some portion of the abdominal or uterine regions, great weakness, insomnia, profuse sweats, &c. But there are some points in the history of this disease to which we desire to call an especial attention; among which are—1, the state of the circulation; 2, the character of the pain; 3, the morbid condition of the urine.

1. *State of the circulation.*—If the other symptoms were insufficient, the state of the circulation alone would furnish ample proof that the system was laboring under a peculiar morbid influence; for we find here a flushed face, great excitement, intense pain, accompanied with a quick, irritable and compressible pulse, the skin being always moist, frequently bathed in perspiration, and great debility. No matter how great the excitement or intensity of the pain, we found the patient complaining of weakness, and annoyance of sweats. In sub-acute puerperal rheumatism we find the same condition of skin and pulse, but with this variation—in this form, the pulse was not always quick and irritable, nor the skin perspirable. There were evidently in

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this form periodical exacerbations, coming on sometimes in the morning, sometimes in the afternoon, or at night. During the exacerbations the pulse was quick and the skin moist.

2. *Character of the pain.*—The seat of pain was either in the uterus, or its appendages, in the abdominal walls, stomach or bowels. We saw no case in which the head or heart was seriously affected. If we were asked to designate any particular region or regions in which the pain was more frequently met with, we should say the iliac region—sometimes one, then both. The pain is at times very acute, so much so as to be augmented on the slightest pressure.

In case second which we have described, it was so severe as to render the weight of the bed-clothes insufferable. In the other form of this disease we find the pain divested of this intensity. Here, it is dull, intermittent, scarcely increased on pressure; prone to shift from one part to another; coming on at regular periods.

3. *Condition of the urine.*—In all of the cases we treated, the urine was highly acid, and with the exception of one case, there was a more or less abundant deposit of lithic acid. This is the most important feature of the disease, and should claim the particular consideration of the practitioner. We look upon it as furnishing valuable aid in making out the diagnosis, and equally valuable indications for the treatment.

Much attention has recently been paid to the chemical condition of the urine in rheumatic affections; and great diversity of sentiment prevails with regard to the intrinsic value of the information drawn from this source. The design of this paper will not allow us to enter into the discussion of this important question, and we must therefore be satisfied with the declaration, that in all the cases of puerperal rheumatism which we had to treat, the chemical condition of the urine furnished plain indications for its treatment, and that in meeting those indications, we treated every case with the most happy results.

*Pathology; diagnosis; prognosis.*—Puerperal rheumatism is

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essentially a humoral disease. We shall not attempt to decide what is the nature of the materies morbi; but whatever its nature may be, its morbid tendencies are general and local. It may affect the system without local manifestations; for, we believe with Dr. Fuller, "in the unessentiality of the relations between the local inflammation and the constitutional symptoms." This opinion is expressed in relation to rheumatic affections generally. It is equally applicable to the disease under consideration. We may find the system affected without a local symptom, or on the other hand, we may find the morbid cause expending its energies on the fibrous or serous tissues. Puerperal rheumatism is not an inflammatory disease; and if the intense pain and great sensibility be regarded as evidences of inflammation, it is an inflammation of a specific kind. The diseases with which this may be confounded, are peritonitis, phlebitis and metritis; but if due attention be paid to the distinguishing characteristics of puerperal rheumatism, which we have fully detailed, no difficulty will be found in making out the diagnosis. It is very important for the safety of the patient as well as the reputation of the practitioner, that it be not mistaken for either of the above diseases, for the treatment is diametrically opposite. Satisfied of the nature of the disease, the prognosis is favorable.

*Treatment.*—In the therapeutic management of puerperal rheumatism we have the following indications to meet: To allay pain; to calm excitement; to restore the secretions to their healthy standard, and to counteract the tendency to prostration. To accomplish these purposes we have to employ local and constitutional means. General depletion and purgatives are to be proscribed. In no case did we find the use of the lancet advisable. We tried purgatives in some cases, but had to abandon them, and resort to stimulants—such were their prostrating effects, even the mildest laxatives would act with too much violence. In all the acute cases, where it was necessary to open the bowels, we employed enemas, and in the sub-acute cases, castor oil or aro-

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matic syrup of rhubarb. To allay pain, local depletion, by cups or leeches, are necessary, and in many acute cases they are indispensably so. But even in the employment of cups and leeches the practitioner should watch closely their effects. Twenty to thirty leeches in the acute, or five or six cups in the sub-acute form, will act well. The repetition of the cups or leeches will depend upon the obstinacy of the pain. Warm applications are always soothing, and in many cases will supersede the employment of cups or leeches. Flannels, dipped in a hot infusion of whisky and hops, are admirably adapted for the purpose. Restlessness and extreme mental anxiety being prominent symptoms, their subjugation becomes necessary; and happily for the patient, we have the remedy, *par excellence*, in opium and its preparations. So valuable do we regard opium in the treatment of this disease, that had we to rely exclusively on any one remedy to the exclusion of others, important as we consider some of them to be, we should take opium; and we must not be very temperate in its use; large doses and frequently repeated are often required. Our method was to give one grain of opium, or one-sixth of a grain of the muriate of morphine every four hours, according to its effects, and in all cases to give a full dose at bedtime, for a sleepless night should by all means be prevented. With reference to opium and its preparations, we have this remark to make, that when the ostensible aim was to calm mental excitement and subdue restlessness, we preferred the morphine, but when we wished to produce a hypnotic effect, we selected opium; hence, our practice was to give morphine during the day and opium at bedtime.

In some cases the hepatic functions are deranged, and calomel must be given; but great caution is required in administering this potent medicine. The practitioner must recollect that he has no inflammatory action to control, or results of inflammatory action to remove in this disease. The blood is already in an impoverished condition, and debility is most always a prominent feature. Under these cir-



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cumstances, the constitutional effects of calomel should be deprecated. One full dose, well guarded with opium, followed in five or six hours by an enema, will often suffice. It may be necessary to repeat it; but as soon as its secernent effects are manifest, it should be abandoned.

We come now to notice a constitutional remedy, of which we desire to speak with emphasis. Whatever hypothesis may be entertained with respect to the true nature of this disease, one thing is certain, that the physician should not neglect to seize the indications furnished by the conditions of the skin and urine. We have described the sweats as highly acid and the urine almost invariably charged with lithic acid. Such being the case, we resorted to those remedies so admirably described by Dr. Headland under the head of "Catalytics"—medicines eliminatory in their influences, and destructive to any materies morbi which may be found existing in the system. The most important among this class is the phosphate of ammonia. It is well known that Dr. Buckner of Baltimore was the first to call the attention of the profession to this medicine. He claims for it pre-eminent properties in certain pathological states of the system; and we can answer, from experience, that in puerperal rheumatism it proved eminently curative. We were guided in its administration solely by the condition of the urine. When the urine was abnormally acid, and deposited lithic acid, we gave the phosphate of ammonia. The dose was generally 10 grains three times a day, and continued until the urine ceased to deposit lithic acid. There are certain conditions of the system in which this medicine seemed to act less efficaciously. Among these we will cite high fever, great pain, and derangement of the liver. In cases of a bilious character we substituted bi-carbonate of soda, and always with benefit. Reasoning from analogy, we gave colchicum, but had to abandon it, owing to its griping and purgative effects; we found the same effects from lemon juice. An early resort to tonics becomes necessary in the management of puerperal rheumatism; and the

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best tonic is citrate of iron and quinine—five grains given twice a day.

In closing our remarks on the treatment of puerperal rheumatism, we desire to impress on the mind the paramount importance of psychological means. The lying-in woman is easily alarmed; her mental faculties are often painfully excited by the most trivial symptom; childbed fever haunts her by day and by night; and when pain is experienced in any portion of the abdomen, her worst apprehensions are aroused. It is astonishing what effect can be produced by the assurance that there is no danger of childbed fever. We have seen this simple announcement act like a charm. Our duty should be to allay this mental anxiety, by assurance of the mild and tractable nature of her disease, and the prospect of a speedy recovery.

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## Art. II.—*Imperforate Anus.* By Alex. Bryant, M. D., of Prince George County, Va.

In a professional career of thirty years, this character of malformation (fortunately very rare) is the first ever brought to my knowledge; and having taken a great deal of interest in it, I have drawn the following report for your very excellent journal:

On the 19th day of January last I was requested to visit the child of Mr. Y. H. W. (two months old), and found it suffering violent pain from inability to discharge its fæces. Its mother (who has grown children) remarked to me, that until that day she had never had cause to suspect any thing wrong about her child; that in her daily attentions of washing, dressing, &c. she had always found its napkins soiled. That morning it cried so much, and appeared to be in such violent agony, together with great abdominal tension and fullness, she thought it had colic, and gave a full dose of castor oil, which not operating in due time, drew her atten-

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tion to a particular examination, and she discovered, for the first time, its real condition.

I found the anus occluded with a dense membrane of a seam-like, ridgy appearance, and near the scrotum a small aperture, which with difficulty admitted the head of my probe. The child being properly secured by an assistant, with a pair of curved scissors I divided the membrane an inch or more. No fæces appearing, I introduced my right fore finger into the rectum, and immediately withdrew it, which was followed by a full and copious evacuation. I put up a linen tent, moistened with oil, with directions to replace it, if it should be forced out, believing and hoping that nothing more would be necessary.

Three weeks after, I was again called to see the case. The mother informed me that she found it impossible to keep the tent in, so great was the muscular resistance. The half of the anus towards the coccygis was closed with a firm union. The child being firmly held, I used a sharp pointed bistoury, and enlarged the orifice as far as I thought judicious, without doing injury to the sphincter. For the purpose of preventing a reunion of the parts cut, I advised the frequent introduction of the small tapering end of a tallow candle, which simple expedient has operated admirably. In thirteen days the cure was complete and satisfactory.

The above case shows how wonderful are the resources of nature in sustaining life, in perfect harmony, under almost miraculous circumstances. This child, without a pain or a fever, lived and grew thriftily for two months, with no other outlet for its intestinal secretions than one so small as scarcely to be seen with the unassisted eye.

I am aware that cases are recorded where children have lived months* and years† with this deformity, ejecting their excrement from the stomach. Not, however, so with my little patient.

* Jour. de Med. Ann. 1770, p. 510.
† Lib. Cit. tom. p. 60.

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ART. III.—*Bellevue Hospital Reports.* By T. POLLARD, M. D.

CORDELIA—Admitted December 22, 1857, æt. 16. Vesico-vaginal fistula, following labor; was delivered in the country by medical men, by instruments, two months since; fistula not far above the neck of the bladder, large enough to admit the finger; adhesion through the whole vagina so close as to preclude the passage of an ordinary sized catheter; besides the fistula communicating with the bladder, there are two, opening into the urethra.

December 26.—*Operation by Dr. Bolton.*—The two fistulæ in the urethra are laid into one; the suture then passed through the urethral fistula, on to the vesico-vaginal fistula, making one operation. The edges being previously pared, Simms' wire ligatures and clamps were used; Simms' self-sustaining catheter was introduced, and the patient put to bed.

January 12.—Ligatures removed; partial adhesion; some power to retain urine.

Jan'y 25.—Another operation with Simms' clamp sutures.

February 8.—Wires removed; further narrowing of the fistula, though some urine still passes by the opening; some power to retain and pass urine by voluntary effort. Apply caustic to edges of fistula twice a week.

March 1.—Abscess in the vulva postponed further operation until date; to-day wire ligatures without clamps introduced, and ends adjusted by twisting.

March 14.—Ligatures removed; opening not further reduced in size; patient has power to retain and pass some of her urine; judged most prudent to send her from the hospital for a while, that her general condition might be improved, and the parts be probably brought in better condition for cicatrization before another operation; no menstruation since birth of child, now five months; child was still-born; chloroform used in each of these operations.

(Case to be continued.)

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Henry—Admitted January 23, 1858, æt. 40. Hydrocele on one side.

Jan'y 23.—*Operation by Dr. Crenshaw.*—After the water was withdrawn, iodine, ʒj, aq. ʒiij, was injected through the canula.

Jan'y 24.—Considerable inflammation. Cold applications.

January 25.—Doing well.

January 26.—Enough inflammation to make adhesion very probable.

February 3.—Discharged, with every hope of permanent cure, though after the subsidence of the swelling some suspicious hardening was discovered in the testicle of the affected side. For this, ℞ Mercurial ointment.

Mark—Admitted January 18, 1858, æt. about 40. Been sick for six months; general prostration of system; nervous and restless; no memory, and almost idiotic; symptoms pointed to *softening of the brain.* ℞ Submur. hyd. grs. 2, opium, gr. j, every four hours; blister to nape; egg-nogg.

January 19.—℞ Camphor, grs. 5; ext. hyoscyami, grs. 2, every four hours, with 1 gr. opium at bedtime, if restless; leave off calomel and opium.

January 20.—Continue treatment.

January 21.—℞ Opium, 1 gr. every three hours until composed; milk toddy.

January 25.—Treatment has been for several days only palliative; sinking; continue toddy.

January 26.—Died.

*Autopsy fifteen hours after death.*—Emaciation considerable. On opening the cranium, some spiculæ of bone found in dura mater, but not large enough to account for symptoms. On cutting into the brain, general softening discovered, more marked on the lateral lobes; considerable effusion in the lateral ventricles, and under the membranes.

Rhoda—Admitted January 29, 1858, æt. 25. Mother of one child, perhaps more; has been in bad health for some

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six or eight months; symptoms indicate some uterine trouble, and such was the statement we had from her medical attendant, a very intelligent practitioner in the country; at the time of her admission, suffering from excessive menstruation, lasting more than a week. ℞ Sulph. magnesia, ʒj; sulph. acid aromatic, gtts. 20, every eight hours; rest in bed.

January 30.—℞ Acet. plumbi, grs. 2, op. gr. i, every eight hours; leave off salts and elixir vitriol.

February 1.—Castor oil.

February 5.—Menorrhagia ceased; on examination by the touch, uterus was found congested, and enlarged to a moderate degree; slight prolapsus; by the speculum, free mucous discharge discovered flowing from the glands of the neck of the womb; os uteri somewhat enlarged; no abrasion; some vaginal leucorrhœa. ℞ Cups to the sacrum, to the amount of six oz. blood; iodide potash, 5 grs. three times a day; inject with sulph. zinc, 5 grs. to the oz.; recumbent position.

February 6, 7.—Continue treatment.

February 8.—℞ Ammonia iron alum, grs. 4; infus. colombo ℥ij, three times a day; tannin, ʒiss; alum, ℥ss, aq. Oij, inject twice a day. Introduce stick of nitrate of silver into the cervix uteri twice a week.

February 20.—Treatment continued up to this time; apply tinct. iodine to os uteri every day; other treatment, same.

March 20.—Patient much improved in appearance; looked delicate when admitted; says she feels almost well; has had her menstruation once during the treatment, natural in quantity; no discharge from the cervix of the womb; considered well.

Tyler Smith recommends the iron treatment in almost all his cases of leucorrhœa (whether there is decided indication of general debility or not), particularly in leucorrhœa from cervix.

James—admitted January 2, 1858, æt. 24. Has been sick for several months, with cough, fever, palpitation of heart,

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and some bloody expectoration, but at no time ill enough to keep his bed constantly. When admitted, the cough very troublesome, expectoration very copious, of tenacious frothy mucus; pulse 120 per minute; pain in the left side, about the cardiac region. On examining his chest by auscultation, the left lung was discovered very imperfectly pervious to air, moist rales in the bronchia, and indistinct subcrepitant rales; dullness on percussion over left lung; pulsations of the heart very indistinct, though the sounds normal, and apparently pushed over to the right of the sternum. The diagnosis was that the patient had been suffering from chronic pleuro-pneumonia, and probably some effusion into the pericardium—that the heart had been pushed over by effused fluid in the pleural cavity, to the right side, and the lung of the left side compressed. ℞ Emplast. canthar. 8 x 10 to the left posterior side; submur. hyd. gr. j, ext. hyoscyami, grs. 2, every eight hours. (Does not seem to be effusion now.)

January 5.—Treatment continued to date. ℞ Tart. ant. et potassæ 1-6th gr., submur. hyd. gr. ½, pulv. doveri, grs. 2, every two hours.

January 6.—Continue treatment; reapply blister; not much improved.

January 7.—℞ Hive syrup, gtts. 20, submur. hyd. gr. 1, tinct. opii, gtts. 20, every three hours; some bloody expectoration.

January 8.—Somewhat better; medicine every four hours.

January 9.—Very slight indication of ptyalism; fever less, still some blood in the sputa; leave off submur. hyd.; continue the other medicine, with 20 gtts. spts. nitre in each dose.

January 10.—℞ Iod. potass. grs. 3; decoction of senega, ℥ss, every four hours; symptoms less acute, and somewhat improved.

January 11.—Continue. Lung does not clear up.

January 12.—℞ Iodid. potass. grs. 5, t. opii, gtts. 15, every eight hours; leave off senega.

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January 13.—Blister to left side, in front; expectoration improving, still dyspnœa; same medicine.

January 14.—Continue; some improvement, though very slow.

January 15.—Dress blister with ung. hyd.

January 16.—Continue. Bloody expectoration has ceased.

January 17.—℞ Scill. gr. 1, submur. hyd. gr. ½, ipecac. gr. 1, pulv. dov. gr. 3, every eight hours.

January 18.—℞ Pulv. opii, gr. 1, submur. hyd. grs. 2, acet. plumbi, grs. 3, at bedtime; other pills continue; some looseness of bowels.

January 19.—Continue; is having night sweats.

January 20.—℞ Submur. hyd. gr. ½, pulv. dov. grs. 3, cret. ppt. grs. 5, pulv. camphor, grs. 3, every three hours.

January 21.—Continue.

January 22.—Some diarrhœa; leave off submur. hyd. ℞ Ol. terebinth, gtts. 10; tinct. opii, gtts. 8, in gum arabic mucilage every three hours.

January 23.—Continue; night sweats.

January 24.—℞ Tannin, gr. 1; s. quinine, grs. 2; pulv. dov. grs. 4, every four hours; considerable diarrhœa.

January 25.—℞ Tinct. rhatany, ʒii; tinct. cinchon. ʒi; tinct. opii, gtts. 8; cret. ppt. grs. 5, every four hours.

January 26.—Continue, with elixir vitriol, gtts. 12, every eight hours.

January 27.—Diarrhœa no better. ℞ Subnit. bismuth, a heaping teaspoonful every three hours, stopping other medicine.

January 28.—Diarrhœa better; continue bismuth. ℞ Syr. wild cherry, ℥ss.; s. quin. grs. 3, every eight hours.

January 29.—Continue, and reapply blister; diarrhœa nearly well.

January 30, 31.—Continue; night sweats very free.

February 1.—℞ Cod liver oil, ʒii, three times a day after eating, with iron by hydrogen, gr. 1; before eating, sulph. acid aromatic, gtts. 12, with subnit. bismuth, if bowels too loose.



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February 2.—Continue; some improvement; lung clearing up some.

February 3.—Leave off iron, as bowels are irritated; pulse continues at 115 per minute; night sweats not so profuse.

February 4.—Continue; some improvement.

February 5.—Reapply blister; increase cod liver oil gradually, as the bowels will bear it, with whisky.

February 6, 7, 8, 9.—Continue; diarrhœa stopped; leave off bismuth; general health improving; appetite good; night sweats nearly gone; pulse still 115; lung more pervious.

February 15.—Improving; reapply blister; continue cod liver oil and whisky and elix. vitriol.

February 28.—Treatment continued to date; patient slowly improving; flesh returning; night sweats gone; still impervious state of lung, and pulse still about 115 per minute. ℞ Iod. potass. grs. 4, every eight hours; continue cod liver oil; leave off elix. vitriol.

March 3.—Continue; increase iod. potass. to 8 grs. at a dose, with tinct. opii, gtts. 5, to restrain its action on the bowels.

March 8.—General health much improved; still some dyspnœa, dullness on percussion, and moist rales in the bronchia, and irritable pulse; directed exercise; same medicine.

March 15.—Same, with cod liver oil in porter; pulse 100 per minute.

March 16.—Tart. emetic ointment to side, and blue mass, 5 grs. every night. Gradual improvement; condition of lung, though improving, is still not good. Pulse 90 in the minute.

The action of the bismuth is to be remarked in this case. It stopped the diarrhœa, when various other remedies had failed.

(Case to be continued.)

Thomas—Admitted January 8, 1858. Ulcer in the sole

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of the foot in an eschar where a burn was received when nine years of age; two and a half years since, ulcer formed, which was treated some time in the country; last year was sent to the infirmary of the medical college, where, under proper treatment, ulcer nearly healed; still the patient was discharged uncured. When admitted into Bellevue hospital, the ulcer was about four inches by three inches, of irregular contour, disposed to bleed, having a fungous, cauliflower appearance, pain at night frequently severe and lancinating; the probe passed two inches towards the plantar fascia, and was evidently arrested in its passage, by this fascia. On consultation, though there was evidently some indication of malignant disease, it was determined to excise the disease.

*Operation by Dr. Bolton.*—On cutting down to the fascia, and removing the diseased mass, the surface below and on each side looked perfectly healthy. Not much hemorrhage; the edges drawn together by adhesive strips and dressings applied; the wound healed kindly until the 22d, when some fungous granulation manifested itself, the whole ulcer not being then larger than a five cent piece; no pain, which entirely disappeared after the operation. ℞ Nit. argent. solid, to the sore every other day, and a ten grain solution of the nitrate on the intervening days; adhesive strips.

23.—Looking better; continue treatment.

24.—Same; continue; disposed to bleed.

25.—Same; continue; sore not so well; much disposed to bleed.

26.—Solid nit. argent. every day; sore about the same.

27, 28.—March 1, 2—Same treatment; no change in appearance.

March 9.—Foot in nearly same condition. By introducing the probe to-day, a small opening was discovered, extending down below the plantar fascia, and reaching the "os calcis." This opening had probably existed some time, but had never before been discovered. Its existence was suspected by pus oozing out from apparently a considerable depth, when pressure was applied, and by the great difficulty of producing

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an entire cure. The suspicion of the existence of malignant disease seemed to be removed by the apparently perfectly healthy surrounding tissue, and by the absence of cancer cells when examined, after the operation, under the microscope.

March 10.—Determined to operate again; sinus laid open; and by tracing it down to the os calcis, found the periosteum of that bone considerably diseased, and the bone denuded; bone healthy. It was thought proper to remove the "os calcis;" which was accordingly done.

March 11.—Patient suffered considerably from pain and nervous disturbance when the effect of the chloroform wore away, so much so, that it was necessary to quiet him with opium.

March 20.—Doing well; has been necessary to give opium to allay the pain about the joint, almost every night. Under the circumstances, the removal of the os calcis was justifiable, though, as an original operation, it would not have been. He had been subjected to very long treatment, and much expense to the master, who was very anxious for something radical to be done, having insisted, when the patient was brought to the hospital, that his leg should be amputated. The periosteum might possibly have been restored, after laying open the sinus, but it was diseased for a considerable extent; and this reparation was problematical.

(Case to be continued.)

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## Art. IV.—*The Pathology and Treatment of the several Diseases of the Throat.* By Robert S. Powell, M. D. of Brunswick County, Va.

Diseases of the throat are judiciously divided, and given the name of the part or structure in which they are located. Thus, we have of the larynx, acute and chronic laryngitis; of the tonsils, tonsillitis; and so for the other subordinate dis-

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eases affecting the other structures. As the pathological conditions of the larynx are such as to excite anxiety on the part of the practitioner, I propose first to consider them in the order of their severity.

Several modifications exist, of the acute form, according to the grade of action, the part attacked, or the character of the extravasated matter. Sometimes the inflammation is superficial, involving only the surface of the mucous tissue. Sometimes the danger is greatly increased by its extending to the sub-mucous areolar tissue, involving that and the mucous membrane at the same time. Finally, the sub-mucous tissue may be swollen as in ordinary acute inflammation, or may be distended with serum in a degree disproportionate to the grade of inflammatory action, presenting indeed an œdematous condition.

From the above, we infer varieties, which may be considered under three divisions:

1. Mucous laryngitis, involving the mucous membrane especially, and attended with mucous secretion.

2. Sub-mucous laryngitis, in which the sub-mucous tissue is also involved; and frequently chiefly so, as in the proper œdematous variety.

3. Pseudo-membranous laryngitis, which is characterized by the formation of false membrane.

These divisions of laryngitis well subserve the purpose of theoretical investigations; but in point of practical utility, I deem them of no great importance. For frequently they are so mutually blended as to baffle the power of the most skillful theorist to determine to which of the three divisions it belongs. However, the first, or *mucous laryngitis* is generally characterized by pain in the larynx, hoarseness and difficulty of deglutition. If the proper precautions are observed, this variety will generally subside with but little inconvenience to the patient. Sometimes the inflammation descends into the bronchi, with a coincident relief of the laryngeal affection. In the severer forms of this variety, the patient experiences a sensation as if a foreign body were in

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the larynx. There is frequently some degree of fever, which may have originated coincidently with the local symptoms, or not until the existence of their duration was sufficient to produce it. In these cases there is evidently congestion and swelling of the mucous membrane, and the sub-mucous areolar tissue must be more or less involved.

*Sub-mucous laryngitis.*—This division includes all the pathological conditions of the former, with inflammation extending to the subjacent areolar tissue; consequently, the difference is rather in degree than in character. This form of the disease is much more dangerous than the preceding, and should always be regarded as demanding prompt attention on the part of the practitioner. The symptoms indicating it are generally chilliness, alternating with flashes of heat, which are followed by fever, a full, strong pulse, hot skin and flushed face. Generally at the same time some soreness of the throat is felt; the voice is hoarse, and a sense of tightness, stricture or pressure is experienced as if there were a mechanical impediment in the larynx. There is a harsh cough in order to remove this, but it only brings up a little clear viscid mucus. Great difficulty of breathing comes on, with prolonged inspiration. The expiration is performed easily, since the swollen membrane of the glottis acts like a closing valve against the entrance of the air, but readily opens for its exit. The epiglottis is sometimes so much swollen as to be erect, so as to be unable to descend and close the larynx during deglutition. As the severity of the case advances, there is great anxiety manifested on the part of the patient for the want of breath. This uneasiness is due to the closure of the chink of the glottis, thereby preventing the passage of air to the lungs. The carbonized blood courses its way through the system, imparting its deadly effects to every function. The organs of the body being deprived of their natural or healthy stimulus, cease to act, and a fatal issue is the result. Delirium or coma generally comes on, which rapidly hastens the case to a fatal termination. No doubt many cases would

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recover after the existence of imperfect respiration, by the performance of laryngotomy, but for the great depression of the nervous system, which incapacitates it to support vital action, even after the admission of air to the lungs. I have recognized this form of the disease as particularly fatal in some instances. So strikingly so was it, that I was induced to believe that there was some peculiarity of constitution which favored its production and fatal termination. The disease originated in one member of a family; and though it had every necessary attention, hurried on to a fatal result. In the mean time, several others were attacked in a similar manner; and though every conceivable remedy was resorted to by several of our ablest physicians, several of the cases soon went on to a fatal issue. The victims of this malign disease were a father and children. Strange to say, none of the servants were attacked, who were exposed to the poisonous effluvia arising from the sick by day and night. There were several other cases in the vicinity—one of which terminated fatally. However, the circumstance of the servants being so long in the sick room, and the great number of visitors not contracting the disease, is sufficient testimony against the disease being propagated from one to another by contagion. But whence this violent form of the disease? Was it the ordinary sub-mucous laryngitis in a malignant form, or was there something specific in its nature? The disease was first no doubt excited into action from ordinary causes, and then on account of some peculiarity of constitution, which seems to have especially existed in this particular family, rendered their systems very susceptible to this malign form. Then it seems it was the sub-mucous variety, induced by ordinary causes, and that its great malignancy was partly due to some peculiarity of constitution, and no doubt partly to the effluvia that was exhaled from a damp cellar to the house.

The systems of these individuals seem to have been peculiarly susceptible to the disease; for while numbers were apparently exposed to the same causes, yet only those men-

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tioned (except two or three who were slightly attacked) fell victims to it. But just as some persons possess some peculiarity of constitution, which serves as a barrier against the invasion of the exanthematous diseases, so did these, on the other hand, seem to possess some peculiarity of constitution which rendered their systems very susceptible to the baneful influence of this direful disease.

The *pseudo-membranous variety* more properly comes under the head of croup. Therefore, for its pathology and treatment the reader is referred to our best authenticated works. It frequently happens that when any portion of the throat is attacked with inflammation it extends to the surrounding structures, and involves more or less all the different parts of the throat. With this observation, I hope to make a corresponding application of treatment.

*Treatment.*—In the various researches of medical science to discover or investigate the relations between many diseases and the actions of medicines, there yet remain many important discoveries to be made. It has been discovered that calomel augments the flow of bile; that diuretics increase the flow of urine; that cathartics increase the action of the intestines, and produce copious stools.

Having seen that there are medicines which act principally on particular parts of the system, we are naturally inclined to enquire, are there none that come to our aid in these hostile diseases of the throat? From observation and experience, I say there are. In the treatment of any form of disease of the throat, I would recommend a perseverance in the use of *guaiac.* Twenty grains should be given three times per day to an adult; and during the intervals a gargle should be used, made of ten grains to the ounce of tepid water. Tepid water gargled alone frequently affords relief in the first stage of the disease. It seems to act, by redissolving the inflammation. I deem cauterization injurious in many cases, by so closely constringing the capillaries as to prevent the free circulation of the blood. Stagnation or congestion of the blood ensues, and the production

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of more violent symptoms is the consequence. Yet I doubt not but it is frequently productive of good, when the proper discrimination as to the stage of the disease and frequency of application is made.

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# TRANSLATIONS AND SELECTIONS.

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I. *Lecture on the Radical Cure of Reducible Inguinal Hernia, delivered at the Grosvenor Place School of Medicine.* By T. Spencer Wells, F. R. C. S.

Gentlemen—As I am about to perform before you an operation for the radical cure of reducible inguinal hernia, I avail myself of the opportunity of advocating a method of treatment which, as it is proved by very ample experience to be both safe and successful, is worthy of general adoption in the treatment of one of the most common and most fatal diseases to which the human race is subject.

You have probably seen in the Medical Times and Gazette, during the last year or two, reports of several cases in which what is called "Wutzer's operation" has been performed. This is the operation, with an instrument modified in some essential particulars upon that of Wutzer, I am about to demonstrate before you; and it is with very great satisfaction that I do so, as I was the first surgeon to perform this operation in Great Britain, and the first who brought it before the notice of the profession here. I did so in a paper which was read before the Royal medical and chirurgical society on the 9th May 1854, and was published in the 37th volume of the "Medico-Chirurgical Transactions." I had assisted Dr. Burmester to do the operation in Malta in 1847. I did it myself in Malta in 1848, and in England in 1850, after a visit I had paid to Wutzer in Bonn, when I saw some of his cases and procured his instruments. Between May 1854, and February 1855, I did four other cases in England. I then went to the east, and Mr. Stretton, one of the surgeons in my division of the hospital at Renkioi, did it upon a Greek. Mr. Holmes Coote was there at the time, and saw this case. He was so pleased with the result, that on his return to England he performed the operation at St. Bartholomew's



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hospital, and thereby deserves the credit of introducing it into London hospital practice. This was more than two years after my paper had been read at the Medico-Chirurgical society—a curious example of the slow progress practical improvements make in our large hospitals. Then Mr. Jones of Jersey took up the operation, and as he asked me to get the instruments made for him by Mr. Coxeter, I directed Mr. Coxeter to have the needle silvered, to obviate the rusting, which I had found objectionable. I think Dr. Vaudin of Jersey and Mr. Hutchinson were the next to take up the practice, and then Mr. Erichsen. More recently Mr. Cumming of Exeter has done it. I have had three more cases since my return from the east, and these are all the cases I have heard of in this country. If you add Dr. Burmester's, Mr. Stretton's, and my own case done abroad, to the eight of my own, seven of Mr. Jones', three of Dr. Vaudin's, three of Mr. Coote's, two of Mr. Hutchinson's, four of Mr. Erichsen's, and one of Mr. Cumming's, done in England, you will find that thirty-one of the operations have been performed by British surgeons, and there has not been a death or dangerous symptom in any one case. But, more than this, the operation has been almost uniformly successful. I do not lay great stress on the cases operated on within the last year, although they assist in proving the safety of the operation, as they are still open to the possibility of relapse; but some of my own cases have now passed ten, nine, seven and three years, without a sign of return. I have not had a failure, a relapse, or a bad symptom, in any one of the nine cases. Mr. Jones tells me the same thing. He says he has not seen any thing to give him the slightest fear or anxiety after the operation; and its success has been complete. He did it in one person as old as 63. He told me of one man whom he saw drunk in a wine shop in Jersey a few weeks after the operation, wearing no truss, and jumping on and off the counter, to show how well he had been cured.

Mr. Coote's three cases were all successful, but he tells me that in another case "a man was persuaded against his will to undergo the operation. The needle was too thin, and it bent, and missed the border of the ring, consequently the plug of the integument slipped out. The patient had no bad symptom, but refused to have the operation completed." Mr. Erichson informs me that of his four cases three succeeded, but "in the fourth it failed in consequence of the patient (a lad) walking about the ward while the instrument was still applied." One of Mr. Hutchinson's cases succeeded; in the other he tells me the man had a very

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large hernia, and suffered from violent cough. Symptoms of inflammation of the sac—not peritonitis—came on, which induced him to remove the instrument on the fourth day. The man did well, but the hernia was not radically cured.

A case related to me by Dr. Vaudin of Jersey tested the value of the operation most completely. A man, 30 years of age, the subject of phthisis, had had a large oblique inguinal hernia for seven years. The operation was performed on the 6th of October last. The man died about the 1st of January, but notwithstanding the severe coughing there was no descent of the hernia. Unfortunately a post-mortem was not permitted. Dr. Vaudin adds, "I have not heard one of the patients operated on complain of pain or discomfort caused by the operation." In another of his cases, the operation was severely tested by a two months' pedestrian tour, but no relapse has occurred. Two of Mr. Jones' patients were seamen, who are now following their occupation without wearing trusses. Some of my own patients are men of very active habits, and I have not yet seen a sign of recurrence of protrusion.

I think I may say, therefore, that the experience of British surgeons, so far as it has gone, speaks strongly in favor of the operation, and if we look to the continent we find a much larger store of recorded experience. Wutzer, in a letter to me, in 1853, says, "I am not able at present to give you the statistical results of all the cases upon which I have operated, as I have not time to collate them. I can now only say that, since the autumn of 1838, I have repeatedly practiced my operation in the clinique every session before many witnesses, and that I have never seen severe peritonitis follow it, still less any fatal result. All those operated on have not been cured. In several, relapse followed, but this was traceable either to the patient leaving off the truss too soon, or undertaking very hard bodily labor soon after the operation." Professor Sigmund of Vienna informed me that he had performed the operation nineteen times in the great hospital of that city, with complete success in fifteen cases. No death happened, but in two cases there was some gangrene of the integuments, and in two relapse occurred.

Last autumn I was in Munich, and I called on Professor Rothmund, who has a larger experience of the operation than any other surgeon. I saw him perform the operation in one case, and saw two men upon whom he had operated, on one three days, and on the other ten days before. I had a long conversation both with the professor and his assis-

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tants. They said the increasing number of patients coming for operation was the best proof of its safety and success. At first Rothmund found it difficult to induce ten patients to submit to it in a year. Now they apply every day. They are mostly working men; and one tells the other how he has been cured. On enquiry as to relapse, the answer confirmed my previous impressions, namely, that in cases where the canal is not larger than to admit the finger easily, the radical cure may be relied on with almost absolute certainty, and that the probability of relapse increases with the size of the canal and rings. When the rings are very large and the canal very short, the chief use of the operation is to make a truss effective. In these cases of widely dilated rings and short canal, my impression was that the operation might be hazardous, but the experience at Munich shows that this fear is unfounded, provided very large cylinders be used, so that the rings are well filled and descent of intestine by the side of the cylinder is impossible. Rothmund has done the operation about 400 times in the Clinical hospital at Munich, and he told me that he had done it much more frequently in private practice, so that he felt convinced he must have operated a thousand times, and without one fatal result. This, I think, is more than almost any one could say of the most trifling operation. No one could expect to do a thousand operations for hare-lip—to tie a thousand nævi or piles—to remove a thousand small tumors—in fact, do the most trivial surgical operation a thousand times, without some untoward result following, accidentally, in some one case. So that this evidence is very strong indeed in favor of the almost perfect safety of the proceeding.

You see I am anticipating objections already; I do so because there is still so strong and general a feeling among surgeons against the adoption of any operative proceeding whatever for the radical cure of hernia, that I feel it necessary at the very outset to convince you that I am not advocating some novel and dangerous innovation, of the safety and propriety of which I am not fully assured. I have really proceeded with great caution—I may say too great caution—in this matter, under the influence of the general prejudice against any operation of this kind. I was very careful indeed—too careful, I think now—in the selection of cases. I waited two years after my first case before I found a second patient—four years after my second before I found a third—willing to have the operation done upon the very qualified manner in which I advised it. I did not venture to urge the operation upon patients. It was only when warmly

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requested to do it, that I consented; and when I read the paper in 1854, I did not advocate it very strongly, but simply asked the members of the society "to consider how far the evidence I have adduced of its safety and success should lead to its further adoption in this country." With further experience, however, and especially since my visit to Munich, I feel much more confident, and take every opportunity, in suitable cases, of recommending patients to submit to the operation, and of bringing it before you and the profession generally.

Before showing you the instrument of Wutzer, and the modified instrument of Rothmund which I now use, it will be well to make you acquainted with the principles of the operation. There are two ways by which the radical cure of reducible hernia can be effected. The sac may be destroyed or closed, or the sac and hernial apertures may be filled up. A great variety of proceedings, with the first object in view, have been adopted from very early periods in the history of surgery down to the present time. Celsus advised incision of the integuments and sac, so as to lay open the sac, and allow it to heal by granulation. This practice was followed so lately as by Pott and Abernethy, but the most dangerous results followed. Then castration was performed in the hope of closing the sac, and it was carried to such an extent in France that it was made penal by statute. This led to what was called the "royal stitch," because by leaving the testes uninjured, it "gave subjects to the king." This operation consisted in laying bare the sac, excising a portion of it, and bringing the upper remaining portions together by suture. Then the sac has been destroyed by caustics or the actual cautery. It has been tied close to the ring, after exposure, by incising the integuments. It has been tied subcutaneously by passing pins beneath it. The adhesion of the opposed surfaces of the sac, and consequent obliteration of the cavity, have been attempted by subcutaneous scarification, by acupuncturation, and by the injection of iodine. This injection of iodine is alluded to by Mr. Fergusson in his last edition, as a plan followed in America by some charlatans who attempt the radical cure of hernia by a secret method. Mr. Fergusson seems to think well of it, though it proved very unsuccessful in the practice of its originator, Velpeau. Indeed, any attempt merely to obliterate the sac, putting aside its great danger, is bad in principle, because the mere obliterated sac offers very little impediment to a new hernial protrusion. We must do more than this. We must contract or close the passage through which

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protrusion takes place. Now, all attempts to do this, with the single exception of compression, have been exploded as dangerous or useless. Compression by a truss and well-fitted pad, properly applied, frequently leads to the radical cure of hernia in young persons, by exciting exudation and adhesion. In adults, however, a radical cure is so seldom effected in this way that we all look upon compression after the age of puberty as a simple safeguard against the descent of the hernia, very seldom attempting to produce a radical cure by a truss; and when the attempt is made, it leads in the great majority of cases to disappointment.

The principle of the second plan is closure of the hernial canal by a portion of skin, forming a sort of plug pushed into the canal, and made to adhere in its new situation. In other words, the inguinal canal must be closed by a portion of the scrotum pushed into it, and fixed there. It can only be fixed there securely by adhesive inflammation of the serous coat of the sac occupying the canal, and it is necessary for the safety of the patient that the inflammation so excited should not extend to the peritonæum lining the abdominal cavity.

I will now show you Gerdy's operation on this subject. The invagination of the skin of the scrotum is the first stage of this operation, as it is in that of Wutzer, but Gerdy merely fastened the plug in its new position by a suture. You see I now form the plug, push the needle along my finger, through the canal and integuments, fasten the thread, withdraw the needle, then make a second puncture, cut off the thread, and remove the needle. The result of this suture is just what you would expect—union of the opposed surfaces of the sac at one point. This slight union would appear likely to give way before very slight force, and this proved to be the case, for relapses were extremely common after operations performed in this manner. A more perfect closure of the canal than can be obtained by Gerdy's operation being evidently desirable, various plans were devised for effecting this closure. One of the simplest is that of Schuh of Vienna, who used the thread of Gerdy for drawing up and holding in the inguinal canal, as I now show you, a sort of wick of cotton of sufficient size to fill the canal. The pressure of this, however, is not sufficiently firm or uniform.

Here is an instrument contrived by Leroy d'Etiolles. It is a metallic cylinder and a cover, which can be so screwed together as to press the invaginated scrotum and abdominal parietes together. If this could be fastened tight enough to prevent its slipping out without injuring the compressed skin it might be a useful instrument, but it cannot. Here is

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another, something like the common American clothes-peg. It was contrived by Max Langenbeck, and has been used by him with success, but it was purposely left so long applied that sloughing of the compressed parts followed, and it was to the subsequent granulation that Langenbeck looked for closure of the ring. The process requires long confinement to bed, so that you see we want some much milder process than that. This Wutzer has afforded us. Here is his instrument, made by his own maker in Bonn, the one I used in my early operations.

The cylinder, which is intended to take the place of the index finger after it has pushed a plug of scrotum through the ring into the canal, is made of very hard wood of different lengths and diameters according to the condition of the canal in each case. In its centre is a canal through which an elastic steel needle passes, and comes out on the upper surface near the point. Over this a concave cover, also of hard wood, is made rather wider than the cylinder, with an opening to admit the point of the needle, and another opening for a metallic staff which rises from the cylinder near the handle, on which a screw works, by which the cylinder and cover can be screwed together. The handle of the needle can be removed by unscrewing.

After using these instruments of Wutzer's I soon found certain alterations desirable. The needle got rusty, caused undue irritation at the point of puncture, and became unfit for use again. This was soon obviated by electro-plating it. Then the necessity for varying the size of the cylinder in each case was troublesome and expensive. I obviated this, though imperfectly, by rolling strips of adhesive plaister round the cylinder until I made it as large as I desired. But this led to irregular pressure, and in Mr. Stretton's case caused a little sloughing, which though it did no harm, might as well have been avoided. The cylinder, too, was too round for the normal shape of the canal. The point of the needle had to be guarded by a piece of cork, which would perversely be knocked off sometimes; and, worse than all, there was nothing to prevent the needle itself from slipping back—the only thing keeping cylinder and cover in their place.

I had thought of different plans for correcting these faults, but not of any thing so good as those for which we are indebted to Professor Rothmund. Here is his instrument. It is made, as you see, precisely on the same principle as that of Wutzer, and at first sight resembles it exactly in appearance, but the cylinder is oval, not round; the needle is not

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steel but silver, with a movable steel point, and there is a knob which can be screwed on after the point is removed, and at the handle there is a spring which is an effectual safeguard against the needle slipping from its place. Lastly, in order to admit of the same cylinder serving for the occlusion of canals of various dimensions, it is so made that side pieces of different sizes can be fitted on to the central portion of the cylinder. I have here covers of different sizes, and you see that by altering the side pieces I can make the cylinder quite as large as one needle could fix well. In cases of very large rings and canals it is necessary to have the central piece perforated for two, or even three needles, but I shall use to-day this one with the single needle, as that which you would employ in the great majority of cases.

Now see what power this instrument gives us. We can alter the dimensions of the cylinder so that while perfectly filling the canal it may push the plug of the invaginated scrotum before it well up to the internal ring, and even project some little distance into the abdomen. We can fix the plug much more securely and evenly than by a suture, or either of the other compressing instruments, and we have complete command over the degree of pressure exercised.

Now for the manner of using the instrument. I need hardly say that the patient's bowels should be opened a day or two before the operation, and the rectum cleared the same day by an enema of warm water; the bladder is emptied, and of course the hernia returned if it be down. This being done you place the patient on his back, with the shoulders raised, the thighs semi-flexed, and the knees separated, just as if you are about to reduce a hernia by the taxis. You place yourself, as I do now, on the side you are about to operate on.

If you can use right and left hand equally well, you may use the left fore finger for invaginating on the left side, and the right to hold the instrument—the reverse for the right side. But the left finger will do for invaginating on either side very well. You see I operate on the left side—so I stand on the left side of the patient. I place my left fore finger here on the scrotum, about an inch below the external ring, and then push a fold of the scrotum before my finger with a little rotatory movement slowly and steadily into the canal, keeping the palmar surface of the finger turned forwards and a little outwards, until it is well under the tendon of the external oblique, and the plug of scrotum is well pressed up to, or through, the internal ring. If you place one fore finger on the abdomen, just over the internal ring,

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while the other is in the canal beneath the tendon of the external oblique, you will feel the tendon very distinctly. As you move the finger backwards and forwards it rolls over the tendon. You should accustom yourselves to feel this, because it is the test by which you know and can be certain that you are well in the canal, and when you have introduced the cylinder, that it is in the canal, and has not slipped anterior to it. When you are quite sure that your finger is in the canal, the next thing is to get the cylinder into the place of the finger, and then to fix it there by the needle. To do this, you take the cylinder with the needle passed within it as far as you can without permitting the point to project, and hold it as I do now in the right hand with the thumb before the screw, the fore finger and second finger on either side of the prong which supports the cover, and the ring and little finger on the under side of the cylinder. Then bend the left fore finger a little, draw it forwards, and slip the cylinder along its dorsal aspect at the same time as the finger itself is being withdrawn. This is the most important step of the whole operation, and the only step which is at all difficult. Without care the plug may follow the finger. Without care the cylinder, instead of slipping beneath the tendon of the external oblique, may slip between it and the integument. You must be very careful that this does not occur, by feeling, as you felt when your finger was in the canal, that the tendon rolls over the cylinder. If you do not feel this, and if the cylinder moves freely beneath the integument, you may be quite sure it is not in the canal, and you must begin again.

I wish particularly to guard you against this mistake, because I *know* it has been made at least once, and I *suspect* oftener. If you feel the tendon rolling over the cylinder you may be quite sure it is in the canal, and the end well up to the internal ring. To fix it there I have only to push on the needle till its point appears through the abdominal parietes, then to put on the cover, and use the horizontal and perpendicular screws until the cover and cylinder are evenly pressed together. Then the point of the needle is unscrewed, the knob put on, the handle of the needle removed, and all is done. You leave the patient with the instrument secured thus.

The whole affair does not take a minute, and as the only part of it at all painful is the simple puncture of the needle, it is quite unnecessary to give chloroform.

I should have told you that you should oil the cylinder before using it, or else smear it as Rothmund does with can-



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tharides ointment. Wutzer does not think it at all necessary to remove the epidermis of the invaginated scrotum. He looks upon the adhesion of the sac as the really important part of the operation. Rothmund, however, thinks additional security is obtained by removing the epidermis, and thus procuring adhesion of the opposed surfaces of the plug. He thinks also the irritation of the skin set up by the cantharides hastens the adhesive process in the sac, so that the instrument may be removed as soon as the fifth day, instead of leaving it to the seventh or eighth. He speaks from such very large experience that I feel inclined to follow his practice for the future, although I am sure it is not at all *necessary* to success.

Then as to the degree of pressure you apply with the screw upon the cover—it should be very slight the first day to allow for a little swelling. The next day the screw may be tightened or loosened, according to the state of the skin. The patient should be kept in bed lying on his back, with the knees raised by a pillow, and the scrotum supported by a cushion or folded towel or two put between the legs. Every day the cover should be raised, to see whether the pressure is equal and not too great. If it does not press evenly a little cotton wool may be inserted, or if it press too much at any point this may be raised by a little cotton put near it.

About the fourth or fifth day you see a little inflammatory redness and swelling round the needle puncture and commencing suppuration. On the sixth or seventh some serous fluid begins to escape round the end of the cylinder. This shows that the epidermis is separating. There is more purulent discharge from the puncture, and the instrument may then be taken away by withdrawing the needle, and carefully removing the cylinder. You will find that the skin of the scrotum may be pulled tolerably hard without yielding at all, showing that pretty firm adhesion has taken place. If at appear to yield on pulling slightly it would be well to replace the instrument for two or three days longer.

The after treatment will vary a little, according to your desire to produce adhesion of the opposed surfaces of the plug to each other or not. Wutzer filled the cavity left by the withdrawal of the cylinder with charpie, dressed the puncture simply, and then put on a common bandage. Rothmund endeavors to obliterate the cavity. He keeps the patient in bed, raises the scrotum by a suspensory bandage, keeps off the pressure of the bed-clothes by a cradle, applies simple dressing to the puncture, and over this a gra-

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duated compress which is made to exert some pressure and keep the two sides of the cavity together by a common figure of eight bandage. The bandage is changed as often as it becomes dirtied by the secretion, and is carefully reapplied. It requires from twelve to fifteen days to secure obliteration of the cavity and cicatrization of the puncture. As I said before, it is only Rothmund's great experience which would lead me to think much of the importance of this obliteration. I tried it in my second case, but no union took place, and in cases where union has taken place the condition of parts a few months after the operation has been precisely similar to those in which Wutzer's practice was followed. Perhaps a middle course will eventually be followed, not filling the cavity with charpie, nor keeping the patient to the bed or sofa after cicatrization of the puncture, but keeping him quiet until this cicatrization is firm, and leaving the cavity to close if it will under the pressure of a compress and bandage, but not being sufficiently anxious about it to prolong the confinement of the patient. In either case the inguinal canal is filled by a firm plug, and for some weeks a sort of puckered depression is seen at its mouth, but this disappears after a few months, although the plug may still be felt. After five or six years the plug itself can scarcely be felt, and the most careful examination can hardly detect any thing abnormal. Rothmund convinced himself that this could not be explained by the sinking of the invaginated scrotal plug to its former position, by tattooing round the opening of the cavity, and observing that the marks did not change their position as they would have done had the plug descended.

If the pressure has been unequal, or the instrument left a day or two too long, there may be a little sloughing around the needle; but I have never seen a slough larger than a sixpence, and this only once. The only ill effect of it is some delay in the cicatrization. I believe if there is ever more sloughing than this, it must be from carelessness of the surgeon, or some unfortunate constitutional condition of the patient, or the crowding and defective ventilation of some hospital ward.

Allowing six or seven days for the period the instrument is applied, and from seven to fourteen days more till cicatrization is complete, you should generally prepare a patient to expect a confinement of three weeks to his room. After this he must wear for two or three months a very elastic truss, with a weak spring and a large well-stuffed pad. If the pressure is too great, or the pad too small, absorption of

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the plug may take place, and relapse of the hernia follow. If no truss be worn, the adhesions, which are still soft and yielding, might give way. It is also well to have a suspensory bandage worn as long as the truss, that the weight of the testicles may not drag down the skin of the scrotum to its former position.

You should also forbid violent exercise until the truss can be left off. After three months the truss may be left off, and I believe the patient is fully as secure against the occurrence of hernia on the side operated on as on the other side, perhaps more so; in other words, that he has not only been cured radically of his hernia, but he has been protected against its occurrence—he is less likely to become subject to hernia on that side than a healthy man.

We are still in want of knowledge of the precise anatomical conditions resulting from this operation which post-mortem examination alone can afford. One of my patients died of phthisis while I was abroad, so that the opportunity was lost in that case. Rothmund has never in all his cases had one fatal result, although he had several when he operated by the methods of Gerdy, Bonnet and Belmas, nor has he happened to be able to open one of his patients who have died of some other disease; but Dr. Thormann of Chur opened a patient of Rothmund's, who died a *short time*—the precise time is not given—after the operation, of some other affection, and he has described the appearances. The patient, 20 years old, of middle size, suffered from a reducible oblique inguinal hernia, of the size of a hen's egg, on the left side. The canal and rings were small, and the smallest cylinder was used. The radical cure was effected; and when the patient died of some other disease, Dr. Thormann found, after death, the invaginated scrotal plug so firmly united by adhesive inflammation to all parts of the canal, that it could not be separated without dissection. The external ring and the whole canal, to within six lines of the internal ring, were completely filled and closed up by the adhesion of the plug. This is the only account of a post-mortem examination after Wutzer's operation that I have been able to find.

In conclusion, let me offer some reply to objections you may hear raised to the operation:

1. The danger and inutility of other operations is no objection to this. We do not incise or excise the sac—we do not destroy it by caustic or the hot iron—we do not tie it—we do not scarify it—we do not inject it with iodine, or do any one of the foolish things which experience teaches us to

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lay aside. We perform a simple operation, which experience teaches us to be both safe and efficacious.

2. Don't be frightened by those who shake their heads at every new thing. When I brought over the ophthalmoscope from Berlin in 1853, and made it known to the profession here by a paper in the Medical Times and Gazette, it was ridiculed as a toy, and denounced as dangerous, because the retina is sensitive to light!—yet now you hear the instrument extolled on every side by those who are learning to interpret its revelations. Some eighteen months ago I demonstrated before you, for the first time in London, the use of the écraseur, and described the instrument in the journal I have just named. Well, it was ridiculed in Edinburgh as a "preposterous engine," and in London as a return to the "barbarous ages of surgery;" yet every day practical men are now finding it more and more valuable. So it will be with this operation. Having overcome distrust and indifference, it is now on the fair way to general favor.

3. You will be told that we want no radical cure for hernia; that the palliative treatment is sufficient; that a good truss is far better than any radical cure. There is some plausibility here, but let me remind you that the fatality after operations for strangulated hernia is very great, and that a large proportion of those who become the subjects for these operations have worn trusses. The trusses have not proved a safeguard against strangulation; nay, by causing thickening of the sac, and contraction of the hernial apertures, they have increased the danger of strangulation when it has taken place. Then all trusses are not good, and good trusses are expensive. They get out of order, and patients get careless and do not keep them in order; and even when good and in order they are very insecure safeguards in sudden and violent motions of the body, or in cases of long continued exertion. Besides, those who wear trusses will tell you that it is not pleasant to have to wear them all their lives, and carry about with them a constant memento of bodily imperfection and possible danger. Contrast this with the three weeks' confinement to the house, and the subsequent safety obtained by the operation I have brought before you, and I do hope you will do your best to assist in hastening the general recognition of its value.

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## II. *On the Proximate Cause and Specific Remedy of Tuberculosis.* By John Francis Churchill, M. D.

The American profession have been recently attracted by the announcement of a new "specific" for phthisis, introduced by Dr. J. Francis Churchill to the French academy of medicine. As the subject is one of interest to our readers, we publish the conclusions of the author in the paper alluded to, and also the experiments of Dr. Cotton of the Brompton hospital, who has tested with much caution the true value of the new remedy. It is well also to mention that the promulgator of this theory is not *the* Dr. Churchill whose name is familiar to all, nor is he a relative of that eminent gentleman.

The total number of cases of phthisis treated by me amounts to thirty-five. All were in either the second or third stages of the complaint; that is, they had either softened tubercles or cavities in the lungs. Of these, nine recovered completely, the physical signs of the disease disappearing altogether in eight out of that number; eleven improved considerably, and fourteen died; one still remains under treatment.

I believe that the results, of which the preceding is a summary, taken in connection with the considerations I have set forth at length in the paper now in the hands of your honorable secretary, will be found to justify the following conclusions:

The proximate cause, or at all events an essential condition of the tubercular diathesis, is the decrease in the system, of the phosphorus which it contains in an oxygenizable state.

The specific remedy of the disease consists in the use of a preparation of phosphorus, uniting the two conditions of being in such a state that it may be directly assimilated, and at the same time at the lowest possible degree of oxydation.

The hypo-phosphites of soda and lime are the combinations which hitherto seem best to fulfill these two requisites. They may be given in doses varying from ten grains to one drachm in the twenty-four hours. The highest dose which I have been in the habit of giving to adults is twenty grains.

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The effect of these salts upon the tubercular diathesis is immediate, all the general symptoms of the disease disappearing with a rapidity which is really marvelous.

If the pathological deposit produced by the dyscrasy is of recent formation, if softening has only just set in and does not proceed too rapidly, the tubercles are absorbed and disappear. When the deposit has existed for a certain time, when the softening has attained a certain degree, it sometimes continues in spite of the treatment; and the issue of the disease then depends upon the anatomical condition of the local lesion, on its extent, and upon the existence or non-existence of complications. I have made numerous attempts to modify the local condition of the lungs by the inhalation of different substances, but have never obtained any satisfactory result independent of what was to be attributed to the specific treatment. The hypo-phosphites of soda and lime are certain prophylactics against tubercular disease.

The physiological effects which I have observed to be produced by the use of the hypo-phosphites of soda, lime, potash and ammonia, show these preparations to have a two-fold action. On the one hand, they increase the principle, whatever that may be, which constitutes nervous force; and on the other, they are the most powerful of hæmatogens, being infinitely superior to all medicines of that class hitherto known. They seem to possess in the highest degree all the therapeutical properties formerly attributed by different observers to phosphorus itself, without any of the danger which attends the use of that substance, and which has caused it to be almost forgotten as a medical agent. The different preparations of hypo-phosphorous acid will undoubtedly occupy one of the most important places in the materia medica.—*Am. Jour. Phar.*

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## III. *The "Specific Treatment" of Consumption. Notes on the Action of Certain Salts of Phosphorus on Phthisis.* By Richard Payne Cotton, M. D., F. R. C. P.

In a "Memoir" lately published in Paris* and presented to the Imperial academy of medicine, Dr. J. F. Churchill has introduced to the profession, as a "specific" remedy for phthisis, phosphorus in certain combinations. A few months

* Sur la Cause immédiate, et le Traitement spécifique de la Tuberculose. Paris, 1858.

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previously he had proposed its employment at the hospital for consumption at Brompton; but having then declined to make known its composition, the offer, like many others under similar circumstances, was necessarily rejected by the medical board. The new remedy, however, being now no longer a secret, and its efficacy, as stated in Dr. Churchill's work, being so "immediate" and unprecedented, I have thought it a duty to give it a fair trial at the hospital for consumption, and to publish the results.

It may be as well to state briefly, that Dr. Churchill is of opinion that the direct cause of tuberculosis is the decrease in the system of the normal proportion of phosphorus in an oxygenizable state, and that the natural remedy should be sought in some compound of phosphorus at the lowest possible degree of oxydation. The hypo-phosphites appeared to him to offer the nearest approach to such a quality; and of these he selected the hypo-phosphites of soda and of lime, as being the most soluble and "assimilable." They "produce, he observes (p. 15), a manifest increase of nervous power, sometimes even from the first day of their administration, together with an unusual feeling of comfort and strength. At the same time the nervous symptoms, if there have been any, disappear, as well as the functional derangement, such as weight, etc. of the intestinal mucous surface. The appetite increases, often in an extraordinary manner. The evacuations become regular, and more abundant; the perspirations, if they have existed, cease; sleep becomes calm and profound." He administered it to thirty-five consumptive patients, all of whom were either in the second or third stage of phthisis. Of these, "nine were completely cured, eleven experienced great melioration, fourteen died," and one was still under treatment.

My experience of this remedy is based upon carefully made observations upon twenty of my own in-patients at the hospital for consumption. Copious notes were taken by Dr. Walker and Mr. Ford, the resident clinical assistants; and are open to the inspection of those who may be desirous of obtaining more information than I am able to offer in the present communication. Dr. Churchill's rules for administering it were carefully attended to; five grains dissolved in water, with the addition of a small quantity of syrup, being given three times a day. The cases consisted of nine males and eleven females, all of whom were adults. Three were in the first stage of consumption, five in the second, and twelve in the third. All were affected with the disease in its simple form, there being no other than the ordinary com-

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plications. The remedy was administered for a fortnight, notes being regularly taken; if at the expiration of this period no improvement was observable, it was discontinued; but if the patients expressed themselves relieved, other medicines were prescribed with the view of testing whether such relief was fairly attributable to "specific" agency, or to other circumstances—such as improved diet, rest, &c.—which should always be taken into account in estimating the effect of medicinal agents upon hospital cases.

Of the three patients in the first stage of the disease, two were not perceptibly influenced by the hypo-phosphites, but afterwards improved considerably under tonic treatment and cod liver oil; the other considered himself much stronger, but before admission to the hospital he had been almost starved, so that good diet, etc. may reasonably claim a fair share of the credit; and he left before other medicines could be tried.

Of the five patients in the second stage of the disease, two were not in any way influenced by the hypo-phosphites, but subsequently expressed themselves as feeling "much better" under tonic treatment with cod liver oil; two slightly improved, but one of these afterwards advanced at a much more rapid rate under steel and oil, and the other seemed to get on quite as well under steel and quinine; the remaining one became much worse from a gradual advance of the malady.

Of the twelve patients in the last stage of the disease, one felt herself better under the hypo-phosphite than under any other remedy; one improved greatly, but not more than under the subsequent use of other tonics; three improved slightly, but afterwards progressed much more rapidly under steel and cod liver oil; two were not at all benefitted, but found themselves "much better" under a change of treatment; in two cases no effect was observed, and in spite of all treatment, the disease ran on; one of the patients became worse, but subsequently gained strength under the oil and quinine; the remaining two died.

Thus, in only two instances could this remedy be said to act with any marked benefit, and in one of these its good effect was very equivocal, the patient previous to admission having been in an almost starving condition, and leaving the hospital before the comparative trial could be made with other medicines. In all the rest it acted certainly in no way as a "specific;" in most, it seemed to be inert; and the few cases which slightly improved during its administration were evidently instances of the post, and not the propter hoc, since some advanced equally, and many of them more



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rapidly under the subsequent use of steel or quinine with cod liver oil.

It is very possible that the compound of phosphorus proposed by Dr. Churchill may in some cases have a tonic and beneficial influence; but to any "specific" action upon tuberculosis it seems to have no claim.

In a foot note to the tabular statement made by the above named clinical assistants, I find the following remarks by Mr. Ford:

"As far as we can judge from these cases, it is obvious that the hypo-phosphites are of no therapeutic value whatever in the treatment of phthisis; indeed they seem to be simply inert, doing neither good nor harm, except indirectly in the latter sense, by interfering with more positively beneficial modes of treatment."

This opinion is fully endorsed by Dr. Walker.

The employment of phosphorus in the treatment of phthisis is by no means novel. For the last eight or nine years I have been in the habit of using a mixture consisting of the dilute phosphoric acid with phosphate of iron; and at my suggestion it has been inserted in our hospital pharmacopœia. In many cases much good has attended, and I think I may say been produced by its administration; but I attribute to it no *specific* action. I believe it is a simple tonic, adapted to certain depressed states of system.

Phosphorus is a well known and apparently necessary constituent of all healthy nerve structure; and in some conditions of low nervous vigor, its medicinal employment may be of very great service. We find that it enters largely into the composition of the most nutritive kinds of grain; and we may be quite sure that it is not placed there without a purpose.

If phosphorus, then, be no specific for phthisis, but a simple tonic acting usefully in certain lowered states of nervous energy, are we to seek further for specific remedies for this most intractable of all diseases? I believe the search will ever be futile. Until we know what life really is; until some new aid can be brought to bear upon its demonstration; until we find out in what consists that diminished power of vitalizing new products, as exhibited in the formation of tubercle and other imperfectly organized substances from the blood, we must be content with treating consumption, as at present, with tonics and cod liver oil.

*Med. Times & Gazette.*

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## IV. *On Ready Diagnosis.* By Prof. Forget of Strasbourg. (Concluded.)

Suppose now, we have finished with the negative diagnosis, and have got at the seat of trouble. It remains to ascertain the precise character of the disease. A primary condition, which is quite indispensable in this research, is a knowledge of the affections of which the organ is susceptible. Despite all simplifications of the art of diagnosis, it can never be taught to the ignorant. Another essential condition of ready diagnosis, neglected by the classical method, is a knowledge of the relative value of the different elements, and especially of the different symptoms of diseases, in order that the most significant may be first sought. Hence ready diagnosis will never give good results except to practitioners endowed with sagacity and learning.

Digestive apparatus.—We pass by the diseases of the region above the diaphragm, as being commonly of easy diagnosis, and come at once to the stomach. The principal diseases of this viscus are, among acute disorders, dyspepsia (*embarras gastrique*), gastritis, gastrorrhagia; among chronic affections, chronic gastritis, simple ulcer, cancer, neuroses.

The most significant symptoms of these affections are the following:

*Embarras gastrique.*—Furred tongue, anorexia, no epigastric tenderness, no fever.

*Gastritis.*—Coated and red tongue, nausea and vomiting, epigastric sensibility, often fever.

*Gastrorrhagia.*—Vomiting of black coagulated blood, antecedent gastric symptoms.

*Chronic gastritis.*—Protracted gastric derangement, epigastric tenderness, often hectic fever.

*Simple ulcer.*—Signs of chronic gastritis, proper signs obscure.

*Gastric neuroses.*—Varied gastric symptoms, tongue clean, no tenderness on pressure, no fever.

These data are common place, yet they are disengaged from insignificant accessories, and I have arranged the most expressive symptoms in the order of their importance as signs. Thus, no *embarras gastrique* without a furred tongue; add to these pain and fever, and you have gastritis. Protract these symptoms, and the gastritis is chronic. If simple ulcer has no peculiar positive sign, that is the fault of the science. If cancer itself is often doubtful, it is because it is indicated by symptoms which are equivocal when con-

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sidered separately, but which interpret each other when grouped. The gastric neuroses are distinguished by the absence of organic symptoms.

The principal diseases of the intestines are simple enteritis (diarrhœa), dysentery, follicular enteritis, different organic lesions, and nervous colic.

*Simple enteritis* has for its chief sign, diarrhœa with abdominal pain, and sometimes fever.

*Dysentery.*—Frequent excretion of sanguinolent mucus, tenesmus, gripes.

*Follicular enteritis.*—Abdominal tenderness, gurgling, dullness in the right iliac fossa, often fever, often typhoid state.

*Organic lesions.*—(Ulcers, tubercles, cancer,) Chronic intestinal disorders (pain, diarrhœa), often hectic fever, cachexy.

*Nervous colic.*—Spontaneous pain not increased by pressure, no fever.

Same general considerations as for gastric affections. Painful diarrhœa is the most significant sign of enteritis; no dysentery, without sanguinolent discharges, etc.

RESPIRATORY APPARATUS.—The chief diseases of this system are: bronchitis, pleurisy, pneumonia, phthisis, emphysema, gangrene and idiopathic asthma.

*Bronchitis.*—Every one knows its signs: cough, mucous sputa, various rhonchi, no dullness.

*Pleurisy.*—Absence of thoracic vibration (in the chest voice), egophony, dullness, stitch in the side, fever or not. Subsequently, dilatation, costal immobility.

*Pneumonia.*—Rusty sputum (not constant), crepitant rhonchus, tubal respiration, bronchophony, dullness, often fever.

*Phthisis.*—Dullness, sub-clavicular râles, special sputa; subsequently, cavernous râles, pectoriloquy.

*Emphysema.*—Prominence, sub-clavicular resonancy, sibilus, feebleness of respiratory murmur, chronic dyspnœa (often complicated with bronchitis).

*Œdema.*—Diffused sub-crepitant râles, coincident anasarca.

*Gangrene.*—Odor *sui generis* of the breath and sputa, various pectoral symptoms.

*Idiopathic, essential, nervous asthma* (rare).—Intermittent paroxysms of dsypnœa.

Although commonly better marked than the diseases of other years, pulmonary affections are often obscure, and readily confounded with one another, for they have few pathognomonic signs. The signs of bronchitis are simple enough, but obscure complications often coexist with it. Pleurisy has its distinctive marks, the absence of thoracic vibration

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being one of the best, say what they will; but this sign is wanting in women and children, and men with falsette voices. So with egophony, which may be confounded with bronchophony. The other signs are common to various disorders, as dullness, which is even occasionally about, according to some revolutionists; dilatation of the chest strikingly characterizes, not pleurisy, but chronic and extensive effusion. Apart from the stitch and fever, the signs are the same as those of effusion, a point not sufficiently regarded. Pneumonia has its rusty sputa as a pathognomonic sign, but this is often absent. Fine, dry, crepitant râle is very characteristic; the bronchial souffle and tubal respiration are more equivocal. The signs of phthisis are obscure and doubtful at first; we gather hints from the constitutional state and the antecedent history (bronchitis, hæmoptysis). We have given only the signs of the confirmed disease, and even these are not absolute, though dullness and râles at the apex leave little doubt. Hæmoptysis is less decisive than is generally supposed. Cavernous respiration and pectoriloquy leave little room for error. The microscope has hitherto only furnished mystification. Emphysema often eludes diagnosis, but its signs have some value; some of the signs of bronchitis have been confounded with them. Œdema of the lungs may be easily mistaken, if only the local symptoms are considered; but the antecedents, and concomitant effusions will clear up the case. Gangrene has its own sign, the odor; which may yet be mistaken. Asthma is characterized by its paroxysmal nature. It will be seen that we loyally announce the liabilities of error, and are simply aiming to arrange a schedule of probabilities. We have not spoken of hydrothorax, for its signs are the same as those of other varieties of pleural effusion; we have likewise omitted hydro-pneumothorax, a rare and complex affection, of which hippocratic succussion is the best sign.

Circulatory apparatus.—The principal diseases of the heart are: Pericarditis, endocarditis, organic valvular lesions, and the form of aneurism which is their ordinary result, nervous palpitations, not to speak of fever, of which the heart is the seat, or rather the instrument.

*Pericarditis.*—Friction sound, derangement of circulation, dullness, præcordial prominence.

*Endocarditis.*—Bellows murmur (equivocal), derangement of circulation, concomitant rheumatism or other phlegmasia.

*Valvular lesions.*—Rude bellows murmur, disorders of circulation, œdema, cyanosis, secondary cardiac affections.

*Aneurism.*—(Dilatation, hypertrophy): Signs of disease of

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valves, dullness, præcordial fullness, disorders of circulation, respiration, etc.

*Nervous palpitations.*—Absence of material lesions.

The diagnosis of heart diseases, the great stumbling block of ordinary practitioners, is comprised in a few signs; but these signs are sometimes difficult to appreciate, or require, at any rate, delicate perception. The friction murmur is an expressive sign of pericarditis where it exists, and is not confounded with modifications of the bruit de souffle. The differential diagnosis of valvular lesions would take us to great lengths. We shall not undertake to classify the signs of diseases of the blood, though they are reducible to a certain order, in which some have greater and others less significance; thus chlorosis has its characteristic pallor and vascular murmurs, scurvy its sanguineous effusions and special cachexy, etc. The subject is too vast and too much disputed for our present purpose.

Cerebro-spinal apparatus.—This chapter is the most perplexing of all, for though morbid anatomy distinguishes accurately the material lesions of the nervous system, diagnosis encounters difficulties hitherto insurmountable. Anatomically, we admit meningitis, encephalitis, sanguineous and serous apoplexy, ramolissement, diverse organic lesions, and the great class of neuroses. To these the following symptoms, alleged to be characteristic, may be assigned:

*Meningitis.*—Delirium, convulsions, then coma and paralysis.

*Encephalitis.*—The antecedent signs, plus contraction.

*Sanguineous apoplexy.*—Sudden abolition of sensation and motion, and generally of intelligence.

*Serous apoplexy.*—Various cerebral disorders (delirium, convulsions), promptly followed by coma and paralysis, often antecedent dropsies.

*Ramolissement.*—Signs of encephalitis, or else more or less prompt invasion of paralysis and contraction, or else simulation of sanguineous apoplexy.

*Organic lesions* (tubercles, cancer, tumors).—Slow course, progressive paralysis; sometimes obstinate headache; delirium, convulsions; ultimately coma.

*Neuroses* (of sensation, of motion, of the perceptive organs, or complex).—Numerous and varied; usually chronic, apyrexic; not continued.

It is thus seen that most of these affections have many signs in common, and that not one of them has an individual characteristic symptom. Yet probabilities may be educed from the grouping of symptoms we have arranged. Thus

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delirium and convulsions, followed by coma and relaxation of the limbs, indicate meningitis. To these symptoms add contraction of the flexors, and encephalitis will be the disorder probably. The sudden invasion of paralysis pertains particularly to apoplexy. Convulsions and coma supervening during dropsy suggest serous apoplexy. Ramolissement rarely comes on with the suddenness of apoplexy, and contraction of the flexors belongs more particularly to the former. Unhappily this contraction is often absent, and is moreover observed in other cerebral affections. Tumors and other organic affections commonly progress slowly, insidiously, and then give rise to sudden alarming symptoms, analogous to those of ramolissement. The neuroses comprise a vast history which cannot be developed here. But practitioners rarely mistake chorea, tetanus, or epilepsy; hysteria is more obscure, and the diagnosis of mental alienation is oftentimes unattainable by the ready method.

Organs of special senses.—The diseases of these organs are, for the most part, to be detected by inspection, and appertain, *ipso facto*, to the ready method. Thus, for the organ of olfaction: coryza, epistaxis, ozæna; for the organ of taste: all the inflammations and organic lesions of the mouth; for the eye: all the external ophthalmiæ and the deep-seated lesions observable by the ophthalmoscope. As to the ear, it is different; the auditory canal alone admits of direct inspection; exploration by the Eustachian tube gives some information respecting diseases of the middle ear; the diseases of the internal ear are enveloped in great obscurity. We have noted already that skin diseases are to be determined *de visa;* though an appreciation of their nature often demands great sagacity on the part of the practitioner.

With regard to those diseases of the organs of special sense, which elude direct exploration, we have already intimated that a scrutiny of the functional condition afforded the means of ascertaining their existence, if not their nature.

Apparatus of locomotion.—The diseases of the organs of locomotion, though revealed by external manipulations, involve grave questions of pathogeny. But we do not now propose to enquire here in what simple arthritis differs from articular rheumatism or gout. We seek simply to determine the individuality of the malady, characterized here by obvious phenomena.

Secretory apparatus.—We shall mention only the most important. As to the *liver*, icterus or ascites may put us on the track; to arrive at precise notions, we have recourse first to palpation, which informs us of the size (hypertrophy),

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form (cancerous degeneration), sensibility (hepatitis). Biliary colic almost invariably indicates the presence of calculi. The kidney suggests analogous considerations; disorder of the urinary secretions, these symptoms elicited by careful palpation; nephritic colic results especially from renal calculi. In regard to calculous concretions of all sorts, the only irrefragable proof of their existence is their exhibition. We know that surgeons often diagnosticate vesical concretions when none are present, and overlook them when they exist. Quite recently an error of this sort has given me great perplexity: A woman duly convicted of cancer of the liver (nodose liver, cachectic tint, etc.) presented, in the region corresponding to the fundus of the gall bladder, a tumefaction, in which palpation detected distinctly a rumpling (*froissement*) which all the attendants attributed to a collection of gall stones. At the autopsy, no swelling was found, and the gall bladder contained no calculus. Be wary, then, in your diagnosis, even when it is founded on physical examination! Verily our science admits only of probabilities!

Genital apparatus.—Most of the diseases of the genital organs of the male belong to surgery. So, likewise, do those of the external organs of the female. The uterus is disputed territory. I cannot enter here into the details of uterine pathology. I will simply say that inspection and palpation will inform us in regard to most of these diseases, and that a host of deplorable errors would be avoided, if practitioners would have the firmness to have recourse at once to direct examination.

General affections.—There are two great classes of diseases, which are considered insusceptible of primary localization, the *fevers* and the *cachexies*. In the first category, we have the so called essential fevers, the eruptive fevers, and intermittent fevers.

The essential fevers, among us, may be reduced, now-a-days, to the single affection known as typhoid fever, and thought to be constituted by three capital elements: fever, typhoid state, and follicular enteritis. Singular, that of these three elements, the most palpable and constant is also the most contested! For those who are not blinded by their passions or prejudices, the intestinal lesion being the anatomical character of the disease, the diagnosis of typhoid fever should consist essentially in the determination of the follicular enteritis; for the febrile state and the typhoid state may both be wanting. Our attention should be first directed to this point; but it is often an obscure one, for

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the intestinal lesion has no pathognomonic sign. We must often rely on the whole group of phenomena, without thinking less of the value of the local signs, or failing to look for them carefully. Thus will be avoided a host of errors, such as are daily committed by practitioners who class under the rubric of typhoid fever a multitude of affections which deserve very different names.

True typhus is distinguished by the absence of the follicular enteritis, by the initial stupor, and the petechial eruption.

Eruptive fevers are obscure only at the outset. Variola has its rachialgia and vomiting, scarlatina its angina, measles, coryza and epiphora; these, with the aid of a knowledge of the prevalent epidemic, will enable us to predict the form of the eruption.

Intermittent, or better, *paludal* fevers, exhibit no symptoms during the interval, unless there is swelling of the spleen, or indication of paludal cachexy. Paroxysms of intermittent are recognized at once by the characteristics of their three stages, cold, hot, and sweating. But the remittent, or pseudo-continued fevers of hot climates have deceived many observers, and probably will often deceive hereafter, notwithstanding the admirable researches of our physicians in Algeria on "quinine fevers"—*fièvres a quinquina.*

As to the cachexies, apart from profound organic lesions, their signs are external. We mention only the diaphanous pallor of chlorosis, the lividity of scurvy, the ecchymoses of purpura, the doughy puffiness of scrofula, the yellowish-green hue of the cancerous cachexy, the tawny yellow of the miasmatic infection, the sallow leaden hue of constitutional syphilis.

The reader who has followed attentively this rapid and imperfect review of the principles and means of ready diagnosis, will be convinced that those cases are rare in which a long interrogatory is requisite in order to arrive at a correct notion of a disease. We should rely as little as possible on the frequently fallacious data elicited by simple interrogation, in my opinion, and my whole secret consists in proceeding straightway to a knowledge of the seat and duration of a disease, and at once examining, by physical exploration, the diseased organ or organs, so as to bring into relief the most striking and characteristic symptoms.

A few examples from every day practice will complete the demonstration of my thesis.

A patient complains of a stitch in the side of several days' standing. I place him on his seat, and, my ear to the chest,



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bid him count aloud—well marked egophony—*pleurisy* then. A moment has sufficed to elicit the diagnosis, which is presently corroborated by other means of investigation.

A patient has stitch in the side, fever, cough without sputa, postero-inferior dullness on percussion, slight tubal breathing; the vocal resonance is equivocal. Some of the attendants say *pleurisy*, others *pneumonia*. I place my hand on the chest, and tell the patient to count: absence of thoracic vibration on the affected side—therefore *pleurisy*. A few seconds have sufficed to elucidate this obscure point.

Another patient has rational signs analogous to the last; the ear detects the fine crepitation, bronchial souffle, and vocal resonance of *pneumonia*.

In each of these cases, almost without asking a question, by making directly for the most expressive signs, we arrive at a diagnosis, which is almost infallibly confirmed by ulterior investigation.

Another less common example: I see a patient with turgid countenance and livid lips, and at once think of the likelihood of cardiac disease. I place my hand under the left nipple, and feel a strong impulse and purring tremor. I at once pronounce *ossification with contraction of the aortic orifice, dilatation with hypertrophy of the left ventricle.* Duration of examination, five seconds. Wonderful, impossible! say the attendants. Nothing more simple, however; the purring tremor indicates surely valvular induration, the strong heaving impulse enlargement of the left heart. All cases, unfortunately, are not so clear.

Let us turn to other organs. A patient has an enlarged abdomen; is it ascites, tympanitis, hypertrophied liver, or spleen, ovarian cyst, pregnancy, or what is it? I uncover the belly, and say at the first glance that it is ascites. And why? because the umbilicus forms a smooth transparent prominence, and of all abdominal tumefactions, ascites alone produces this effect. A second only has been occupied in clearing up this case.

Another enlarged abdomen—dullness in the middle, resonance on the sides: it is an ovarian cyst. No? You think it is a pregnancy? I introduce my finger into the vagina, and find the cervix low down and deflected; you see it is not a pregnancy.

A woman of fifty years, pale and sallow, says that her menses, which stopped years ago, have latterly reappeared. She probably has uterine cancer. Touch and decide.

A young girl tells you that she has flowed copiously, the catamenia having been previously suspended for several

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months. Distrust metrorrhagia in young girls. Like enough this a case of abortion, and you may find an ovum of three months in the vagina.

A sickly looking man has alternate diarrhœa and constipation; he has pain and passes blood with his stools; his doctor has told him that he has piles. Take care! he probably has a cancer of the rectum. Introduce your finger and judge.

We should never have done with illustrations borrowed from the practice of every day. I have selected a few of those about which fatal errors are often committed, errors which may readily be avoided by seeking the most significant symptoms by the most direct modes of investigation, without yielding to personal repugnances on the opposition of mistaken or simulated modesty.

But this quick method has its perils, and we should always seek to corroborate and confirm its results.

A girl of 18 years, of feeble habit, says that her catamenia have been absent for several months; the hand detects a circumscribed globular tumor in the hypogaster. We say that the girl is enceinte. An hour afterwards, a copious discharge of urine, and the pregnancy has vanished! Chlorosis alone remains. This is one of the humiliating errors that may be incurred in following the ready method, without looking for confirmatory evidence of the diagnosis. The touch would have betrayed the distended bladder.

Notwithstanding these restrictions, cautions, and illustrations, the pedants will be sure to criticise these essays towards simplification. I already hear the accusations of prestidigitation, of a desire to dazzle our public, etc. I reply that there are two ways of throwing dust in the eyes of the vulgar. One consists in being always ready with an infallible diagnosis. Our readers must judge whether my plan appertains to this juggling system. The other way is to pump a poor patient completely dry, to dissect him to his ultimate fibre, *apropos* of a whitlow or a sore throat, in order to assume the airs of scrupulous, profound, exact science. Chemistry and the microscope have lent a new impulse to this industrial method, which experience and common sense will some time reduce to its true value. The indolence of ordinary practitioners is incompatible with all this paraphernalia; as the majority of physicians will only employ simple weapons, we should try at least to furnish them with those that are well tempered.

I fear that I shall share in the abuse showered on those poor *manuals*, which have at least the merit of teaching some-

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thing to those who would otherwise know nothing. I shall be accused of wishing to "lower the standard of acquirement," the time-honored phrase, and of compromising the dignity of our art in placing it within reach of the indolent, the stupid, and even the outsiders, etc. I shall care little for such reproaches. My attempt at simplification of diagnosis is the result of extended practical observation of investigations carefully and laboriously matured, combined, and arranged, so as to offer to practitioners the quintescence of the mass of materials heaped up in verbose and voluminous treatises, which embarrass the student and practitioner almost as much as they help him. I seek to substitute positive medicine for exact medicine.

Lastly, what is the use of analysis, if not to lead to synthesis? These two processes reciprocally support each other; for if it is true that to comprehend is to simplify, before we can simplify we must understand. Hence, however simple it may be made, medicine can never enter the head of a numskull.

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# CHRONICLE OF MEDICAL SCIENCE.

## MEDICAL PATHOLOGY AND THERAPEUTICS.

1. *Experiments with Bibron's Antidote to the Poison of the Rattlesnake, &c.* By WILLIAM A. HAMMOND, M. D. Assistant Surgeon U. S. Army.

Some four years since, Prince Paul of Wurtemburg, the celebrated naturalist, communicated to my friend, Mr. De Vesey, the results of some experiments performed before the French academy of sciences by Professor Bibron, relative to an antidote to the poison of the rattlesnake. According to Prince Paul, Professor Bibron allowed a rattlesnake to bite him in the lips, cheeks, etc. and by taking the antidote discovered by him, prevented all alarming symptoms, and in fact suffered no inconvenience therefrom.

The antidote in question, as stated by Prince Paul, is prepared according to the following recipe: ℞ Potassii iodidi, gr. iv; hydrarg. chloridi corros. gr. ij; bromini, ʒv. M. Ten

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drops of this mixture, diluted with a tablespoonful or two of wine or brandy, constitute a dose, to be repeated if necessary. It must be kept in glass-stoppered vials, well secured.

Prince Paul forwarded a small quantity of the above mixture to Mr. De Vesey, who used it successfully in the cases of two men bitten by rattlesnakes near his residence in Iowa.

During a recent expedition to the Rocky mountains, I had several opportunities of testing its efficacy, and, since my return, have performed additional experiments with it. The results have been, upon the whole, exceedingly satisfactory, and I think that, when taken in time, it may be entirely depended upon in the poisonous wounds of the rattlesnake, and perhaps also in those of other venomous serpents.

*First experiment.*—Heinrich Brandt, acting hospital steward, was bitten, on the 2d of July 1857, in the index finger of the right hand by a large rattlesnake (crotalus confluentus), which he was in the act of putting into a jar for preservation. The snake inflicted a very deep wound, and hung by his fangs to the finger for a second or two before it could be detached. About four minutes after the bite, and before much pain or swelling had ensued, I administered one dose of Bibron's antidote. The symptoms almost immediately disappeared. Forty minutes after giving the first dose the pain and swelling returned, attended with considerable throbbing. I repeated the medicine, and in less than five minutes the finger had regained its natural appearance, and all pain and swelling had vanished. He remained perfectly well, and resumed his duties in an hour from the reception of the injury.

*Second experiment.*—A very large rattlesnake was made to bite a young wolf (canis occidentalis) about three months old. The serpent wounded the animal severely in the left flank. Fifteen minutes after the bite the leg was much swollen, and the wolf exhibited signs of great uneasiness, yawning, stretching, and looking about in an anxious manner. These symptoms continued to increase in intensity till inability to stand, drowsiness, and slight convulsive movements ensued. I now (thirty minutes from the infliction of the wound) gave six drops of the antidote, with the almost instantaneous disappearance of the observed symptoms. In a few minutes afterwards the animal ate a large piece of meat.

*Third experiment.*—On the following day the same snake was made to bite the wolf three times in the space of five minutes, in the flank, neck and chest. In two minutes

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after the last bite the effects of the poison were evidenced by the inability of the wolf to stand, gasping respiration, and a fixed expression of countenance. Some delay occurred in getting the antidote ready, and before I could administer it all signs of life had apparently ceased. Nevertheless, I placed six drops far down the throat, where it seemingly remained, as no effort of swallowing was perceived. However, in one minute respiration again commenced, and the heart could be felt to pulsate. The wolf lived twenty-seven minutes, and then died comatose.

The rapidity of the action of the poison in this case, owing to the large quantity introduced into the system, prevented a successful issue. The good effects of the antidote were, however, sufficiently apparent to every observer, and I have no doubt that, had it been given before the faculty of swallowing was lost, the life of the animal would have been saved.

*Fourth experiment.*—After my return to Fort Riley, a large crotalus confluentus, which I had brought with me from the Rocky mountains, was made to bite a dog five months old. The wound was made in the right shoulder. The poisonous effects of the bite commenced in ten minutes, causing gasping respiration, inability to stand, etc. I attempted to give a dose of the antidote, but the dog would not swallow, and I had no means at hand by which to introduce it into the stomach. I again tried to administer the remedy, but without success. The third dose was inhaled into the lungs. By this time the dog was perfectly senseless, and died in forty-five minutes after the infliction of the bite. Very slight swelling occurred in the wounded part.

*Fifth experiment.*—Forty-five minutes after the last experiment the same snake was made to bite another dog of the same litter as the preceding. The wound was inflicted in the lower jaw, very near the mouth. At the end of three minutes, and before any violent symptoms ensued, a dose of the antidote was given. The dog swallowed it readily. Five minutes afterward the animal seemed very uneasy. Respiration was accelerated, and he preferred to lie down in the shade. At the end of about fifteen minutes he could stand with difficulty; and, as the sickness appeared to be on the increase, another dose was administered. Nearly half of this was lost. Slight swelling was now perceived in the face and neck. When roused the animal would walk a few yards, though with great difficulty, and evidently preferred rest and quiet. About one hour after the bite he lapped a little milk and seemed to be better, wagging his tail when

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spoken to, and walking with less effort. No increase of the symptoms occurred, and, in fact, the dog was, to all appearance, perfectly well in two hours after the reception of the injury, except that slight swelling of the under jaw still remained. I saw him no more till next morning, when this had disappeared and he was as active and lively as ever.

I had no further opportunities of repeating the experiments with other animals. During my absence, however, the antidote was used by Dr. Coolidge, U. S. Army (to whom I am also indebted for assistance in the latter experiments), in the following case, of which he has favored me with the subjoined account:

"In July 1857, a girl, aged fifteen years, was bitten at Fort Riley by a rattlesnake, on the dorsal aspect of the first phalanx of the ring finger of the right hand. In a few moments the finger became swollen and bluish, and when I first saw her, about ten minutes after the receipt of the wound, the forearm had begun to swell, and pain extended to the elbow. She was depressed and somewhat nauseated. An elder sister had sucked the wound from the first instant. There being sufficient space above the wound, I applied a cord tightly around the finger, and then made a free incision down to the bone. As soon as the articles could be procured from the hospital, I gave ten drops of the bromine mixture diluted, and injected into the wounded finger the preparation recommended by Dr. David Brainard of Chicago, Illinois (see Annual Report Smithsonian Institution, 1854), viz: ℞ Iodinii, grs. x; potassii iodidi, grs. xxx; aquæ destillatæ, f℥j. Solve. The patient expressed herself relieved after the first dose of the bromine; a second was given in twenty minutes. The solution of iodine injected caused severe smarting pain; the fluid and air from the syringe could be felt a little above the wrist, and ultimately caused suppuration of the cellular tissue on the back of the hand. Nothing more was done. The girl recovered."

In conjunction with the mixture referred to in this paper, it will be observed that Dr. Coolidge laid open the wound and injected the cellular tissue with tincture of iodine, as recommended by Dr. Brainard of Chicago, so that the favorable result in this instance cannot be attributed solely to the use of Bibron's antidote.—*Amer. Jour. of Med. Science.*

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2. *On the Therapeutical Action of Chlorate of Potash, with a New Mode of Administering it.* By Dr. DETHAN.

Dr. Dethan considers that chlorate of potash is a powerful sialogogue, and that its elective action on the bucco-pharyngeal mucous membrane is well marked. To this physiological action is added a very remarkable and valuable success in pathology; its rapid and incontestable effects in mercurial salivation, by checking the formidable mercurial affection, have permitted practitioners to continue the mercury without fear, and thus to contend without remission against the constitutional infection. As an especial and incontestable remedy in ulcero-membranous stomatitis, this medicine need not, according to the physicians of the Hôpital Sainte-Eugénie, be swallowed; its topical application is sufficient, and in a short time the mucous membrane recovers its normal qualities and functions. Dr. Dethan concludes that the chlorate of potash, administered under a special form, which would permit the local action to be exercised slowly and certainly, although leaving the medicine to be carried into the stomach in a state of solution with the mixed liquids of the salivary, buccal, and pharyngeal glands, would be the mode of administration which would combine all indications and all opinions. He therefore suggests the use of the remedy in the form of pastiles, so that the patient may have at hand a remedy against the injurious effects of a mercurial treatment which he may be undergoing. The experiments of Dr. Ricord, and the publications of M. A. Fournier, testify incontestably in favor of this successful simultaneous medication. In certain forms of angina attended with fibrinous exudations, it prevents the intimate adherence of the false membranes to the mucous membrane, and facilitates their expulsion, and assists the action of emetics. In this affection the topical action of the chlorate, favored by the bruising between the teeth, the natural solution in the liquids of the mouth, and its penetration into all the points interested, will be certainly efficacious. In debilitating diseases, such as diphtheritis, and gangrene of the mouth, the child will find an agreeable and reparative kind of food, together with the most appropriate remedy hitherto discovered, against these diseases.—*British and Foreign Med. Chir. Review—L'Union Médicale.*

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### 3. *Belladonna in Nocturnal Incontinence of Urine.*

It is well known that Professor Trousseau of Paris has great faith in the use of belladonna as a means of curing that most troublesome habit, for it can hardly be called a disease, nocturnal incontinence of urine in children. We believe we are correct in saying that many who have tried the remedy, in accordance with the recommendation of the eminent French physician, have been disappointed in the results; the complaint, though apparently checked for a time, soon returns in many instances, with all its obstinacy, and both patient and physician, wearied with the close attention which the treatment demands, are disposed to abandon the disease to nature, which fortunately in the majority of cases effects a cure, after a longer or shorter lapse of time.

An article which appeared in the Gazette des Hopitaux last October, describing M. Trousseau's method of treatment, lays so much stress upon the length of time during which the belladonna must be given, that we are inclined to think the remedy has often failed through want of perseverance on the part of the parents of the child, or of the medical attendant. A case is related in the Gazette, which illustrates well the length of time the belladonna ought to be employed. The patient (who was a girl of 19 years) began to have nocturnal incontinence of urine at the age of eight years, and since that time had been in the habit of wetting the bed once, always, and generally twice, in the course of the night. On her entrance into the hospital, one-fifth of a grain of the extract of belladonna was given her every night. This quantity was soon after successively increased to two-fifths, three-fifths, four-fifths of a grain, and to one grain. There was an immediate improvement in the symptoms. The involuntary discharge occurred only every second or third night, and only once in the night. Sometimes she was free from the trouble for four successive nights, and then urinated once each night for two, four or six nights together. The dose was gradually increased up to two grains, when the patient passed twenty-two days without a trace of incontinence, but it began again, with intervals of from one to ten days. A further increase, to three grains of the extract, was then ordered, and from this time the affection ceased entirely. M. Trousseau, however, continued to augment the dose slightly, with the intention of persisting in the remedy, without farther increase, for three, four or even five months, after the symptoms had entirely disap-



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peared, and then to diminish the dose very gradually, until it should be finally suspended. In many cases he does not stop the belladonna until a year has elapsed after the incontinence has ceased.

So annoying is this affection, that we are glad to be able to give the above details of M. Trosseau's treatment, recommending to any one, who may have an obstinate case, to follow it. It requires only perseverance for its observance, and can do no harm if it does no good.

### 4. *Treatment of Intermittent Fever by Douches of Cold Water.*

M. Fleury has addressed a note to the French academy of sciences, announcing that he has treated successfully 114 persons, attacked with intermittent fever, simply by douches of cold water. Forty-three of these cases were recent and seventy-one old, and had resisted other treatment. In all these last cases, there was a swelling of the spleen or the liver, or of both, and a state of anæmia or even of cachexia. In some there was a complication of dysentery, hematuria, scurvy, albuminuria or hallucinations. No other mode of treatment had been employed but cold douches, and there has been only one reappearance of the disease. Only one douche has been enough to cure in some cases, never has it been necessary to employ more than five. This influence of the douche exists only when it is applied just before the fever sets in, or immediately after it has begun.—*Med. Times and Gaz.*

### 5. *Dry Cupping in Typhoid Fever.*

Affections of the respiratory organs occurring in the course of typhoid fever constitute a very dangerous complication; and M. Beecher has treated them of late at the Beaujon with great success by the application of large numbers of dry cupping glasses to the chest, and especially to the lower extremities. The number has varied from twenty to eighty cups, divided into two series, one applied in the morning, the other in the evening. The number in some patients has amounted to five hundred in ten days. Large ecchymoses form on the limbs, but these have never given rise to the least mischief; while the thoracic symptoms become effectually relieved. M. Beecher declares that since he has followed this plan, the mortality of these fevers with

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this heretofore dangerous complication has fallen to zero; and M. Bourdon of the Lariboisiere, reports as favorably. M. Beecher has not found the same benefit result in the comatose form of typhoid fever.—*Bull. de Therap.*

6. *Fistula in Ano, in its relation to Pulmonary Tuberculosis.* By P. H. Strong, M. D.

Dr. Strong embodies in the following formula the doctrine generally held with regard to this subject:

"The relations of fistula in ano to pulmonary tuberculosis are such, that its presence, either as antecedent to or coexistent with the latter, is a desideratum, and to be sedulously cherished, having reference to its (pulmonary tuberculosis) prevention in the one case, and to its cure or favorable modification in the other."

Dr. Strong argues against the correctness of this doctrine, first, that it is based mainly on the belief of a revellent influence being exerted by the fistula, while an enlightened pathology and clinical observation teach that such an influence is of little or no value in preventing or retarding the progress of pulmonary tuberculosis; second, other and kindred affections, scirrhus and melanosis, depending alike on a blood dyscrasy, are not affected generally by revellent or derivant discharges; third, the doctrine originated when erroneous views prevailed respecting the causes, nature and management of tubercular affections.

Conceding that tubercular matter is discharged, as it were vicariously, by means of the fistula, he contends that the proper object for therapeutics in this affection is not to eliminate the material, but to remedy the dyscrasy, by removing the conditions on which it depends.—*Buffalo Med. Journal—N. A. Med. Chir. Rev.*

7. *Treatment of Erysipelas by the Topical Application of Tobacco.*

We find in the Western Lancet some remarks by Dr. John G. Stephenson of Terre Haute, Ind. on the topical use of tobacco in erysipelas. He has found it so uniformly beneficial that its use has become with him a matter of routine. The treatment is simply the covering of the inflamed surface with wet tobacco leaves (such as are to be had at any cigar shop), which are permitted to remain until much nau-

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sea is produced. The powerfully sedative action of tobacco on the arterial system, its relaxing and diuretic properties, would seem to point to it as one of the best agents with which we are to combat inflammation. But while the excessive nausea produced by its internal use is a bar to its free employment in that way, Dr. Stephenson's experience with it seems, to him, to establish its power and safety, when cautiously applied to a cutaneous surface to remedy a local inflammation.—*N. Jersey Med. Reporter.*

8. *Compression of the Carotids in Epilepsy.*

In the case of a young man who had suffered from more than 500 epileptic attacks within the space of eight years, Dr. Reiner tried the effect of compressing both carotids until the complete cessation of the pulsations. This procedure, practiced 22 times on the first appearance of precursory symptoms, always had the effect of reducing the paroxysm to a few almost insignificant convulsive movements. Meanwhile the patient's general condition, both bodily and mental, has greatly improved.—*Rev. Med.*

9. *On Indications and Treatment in Croup.*

According to Luszinsky of Vienna, there are four indications to be followed in croup, which are:

1—To alter the peculiar crasis of the blood. This indication requires antiplastics, of which hepar sulphuris, sulphate of copper, and tartar emetic are either too uncertain, or too dangerous, because repeated vomiting would be injurious by congestion of the brain, and mercury, which readily injures by producing diarrhœa, salivation and general mercurialism. Better than all of them, are alkalies, which Luszinsky seems to have recommended prior to Lemaire and Marechal of Paris. The hydrate of potash or soda is most antiplastic, but they are not easily tolerated; the bicarbonate is the most digestible, but the abundance of carbonic acid in the chemical composition of the bicarbonate of potash or soda diminishes the medicinal effects of the alkalies; therefore he gives the carbonate of potash or soda, from one-half of a drachm to two drachms every day.

2—To prevent the localization of the inflammation in the larynx. This indication requires no bleeding, nor leeches, but, in the first stages of the disease, cold applied to the

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larynx, and large blistering plasters, kept in suppuration for some days.

3—To remove the spasm of the larynx by narcotics.

4—To destroy, or remove the pseudo-membranes, which have been formed. The best caustic in these cases is a solution of from four to eight grains of nitrate of silver in an ounce of water, which is to be applied by a brush. Emetics are necessary, where pseudo-membranes are loose, or beginning to loosen, in the larynx or bronchi.

*Journal für Kinderkrankheiten.*

10. *Quinine in Typhoid Fever.*

We had the opportunity of seeing a case of typhoid fever on January 14th at St. George's hospital, under Dr. Fuller's care, which was being treated by quinine. The patient was a little boy, eight years old, who was admitted with well marked symptoms, but whose previous history was imperfect. He had a very distinct mulberry rash over his body. Ten grains of quinine were ordered the first day every two hours, and the change produced in the general symptoms was positively striking: the pulse came down, his skin was cool and moist, a diarrhœa ceased, and his tongue was moist. As this was the case, Dr. Fuller did not desire to push the large doses (he had taken three only), but continued the medicine in two-grain doses three times a day, with four ounces of wine, and the little fellow is going on well. This is the third case in which this plan of treatment had proved successful in Dr. Fuller's hands; it has been employed elsewhere with great benefit.

11. *Intussusception of the Bowels.* By J. M. Hammer, M. D. of Sevierville, Tenn.

Dr. Hammer reports the following extraordinary case:

"The patient was attacked in December with acute lancinating pain in the abdomen, paroxysmal, recurring after short intervals; the pulse 90, strong and full; nausea; great anxiety. He was bled freely, anodynes were administered, but relief was not obtained for forty-eight hours; he then slowly recovered. Further details of the history and treatment are not given. A little over a month afterward, Dr. Hammer was summoned in haste to the patient, who lived at a distance of six miles. When he arrived he found

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the patient comfortable, but was informed that a very strange worm had been passed from the bowels. On examination the worm proved to be 'about twenty inches of the *ileum*, with its mesenteric glands,'" etc.

The reporter concludes that there had been an intussusception, followed by adhesion and sloughing away of the invaginated portion of the intestines.

The health of the patient remained good until the following spring, when, after eating a hearty meal of onions and walking over his farm, he became suddenly ill and died in a few hours. A post-mortem examination was not made. *Southern Jour. of the Med. and Physical Sciences—N. A. Med. Chir. Rev.*

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## SURGICAL PATHOLOGY AND OPERATIONS.

1. *On a case of Aneurism of the Innominata Artery treated by Pressure on the Carotid and Subclavian Trunks.* By A. M. Edwards, F. R. C. S. E. Demonstrator of Anatomy in the University of Edinburgh.

Surgery can do so little towards relieving the disturbed symptoms produced by aneurisms at the root of the neck, that any contribution to our knowledge on the subject must have some value; but I am induced to lay the following case before the profession, not so much on account of any merit specially pertaining to itself, as that it may set other men thinking, and may lead them to some more efficient means of alleviating the sufferings of those who are the victims of deep seated aneurisms:

In September 1856, Mrs. L. aged fifty, was recommended to my care by Professor Simpson. She was a sallow-complexioned woman, with hanging, flabby cheeks; her lips, which were always apart, were livid and drawn down at the angles, and she breathed rapidly. Her countenance presented the peculiar anxious expression of one suffering from a fatal disease. On examining her neck, I found on the right side above the sterno-clavicular articulation a tumor, the size of an apple, situated between the sterno-mastoid muscle and the middle line of the neck, which pulsated violently, was soft and compressible, giving to the fingers much the same feeling as a vulcanized india rubber ball, which,

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though easily compressible, expands again immediately the pressure is withdrawn; and with the expansion of this tumor, fluid seemed rapidly to fill the interior, and to be separated but by a thin partition from the fingers. Another pulsating tumor rose in front of the trachea. They were, though apparently distinct, evidently bulgings out of the same aneurism, as pressure on the one was followed by increase in size of the other. The patient had remarked these tumors about two months before I saw her, and they were, according to her account, increasing rapidly. Any pressure upon them was attended with pain and an increase of cough. She suffered from constant dyspnœa, had entirely given up her ordinary household occupations, and had frequent fainting fits; she rarely ventured even at night to lie down in bed, as, after falling asleep, the laryngeal spasm became so violent, that an attendant had to be on the watch ready to administer restoratives. The ordinary internal remedies were tried, but without much benefit.

As I considered that the aneurism was one of the innominata artery, I thought of placing ligatures on the vessels according to Wardrop's method; but Dr. Laycock, who at my request examined her chest with the stethoscope, considered that the arch of the aorta was also aneurismal, so I gave up the idea of a cutting operation. But it struck me that Mr. Wardrop's principles could be applied to compression, and Mr. Young of Princes street constructed for me an instrument which I shall endeavor to describe:

A broad leathern belt to go round the chest, and fasten in front with three straps and buckles. On its left posterior and right anterior upper margins are brass buttons. In the middle of its posterior aspect is an iron plate perforated with several holes to admit screws, which attach to it an upright steel rod about eighteen inches long. This rod supports an arc of steel, which is attached to it by a screw allowing a certain amount of motion. In front, this arc is perforated by another screw, about an inch long, with a small cross handle; this projects backwards, and bears a conical piece of cork covered with wash leather. When the instrument is applied, the upright is at the back and right side of the neck, which rests in the arc, and by shifting the lower end of the upright pressure with the cork, can be regulated and efficiently maintained upon the common carotid artery, the conical shape of the cork enabling one to confine the pressure to the artery. A strap is carried over the right shoulder from the buttons behind to those in front; on it slides another cone of cork, which can be adjusted over the subcla-

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vian. It will be seen that in principle this instrument resembles Bourgery's tourniquet for subclavian pressure.

Mrs. L. had worn this instrument for several hours of two days, when I was alarmed by observing that the tumor had visibly increased in size. Its walls felt thinner, and the contents were distinctly fluid. The bruit de soufflet was very loud, and the pulsation violent. The treatment, however, was continued, and the pads adjusted so as to stop all pulsation in the branches of the external carotid and in the right wrist. On the fourth day, the tumor, though larger than when the instrument was first applied, was much harder and less compressible. The tracheal portion still, however, pulsated violently. Every morning, for the first two weeks, I adjusted the apparatus, at the same time manipulating the tumor rather roughly, with the view of breaking up the fibrin in the sac. But she soon learnt how to apply it for herself, and finding decided benefit from it, bore the treatment cheerfully. She said it was irksome, but never complained of pain.

After the first week, the laryngeal symptoms entirely disappeared and did not return, and she had no more fainting fits; but she complained of some impediment in swallowing, as if some hard body stopped the food in its passage down the gullet. I now feared that the apparent improvement was deceptive, and that the tumor was increasing towards the œsophagus, but as this symptom disappeared with the gradual decrease in the bulk of that part of the aneurism which we could judge of by external examination, I now conclude that it arose from the solidification of the contents of the sac in close apposition to the gullet.

By the end of three months, she was well enough to lay aside the instrument and resume her former household duties. She repeatedly walked a distance of three miles and back to my house, and passed tranquil nights. The external part of the tumor was then and is now the size of a nut, and hard; the tracheal portion has entirely disappeared; the aortic aneurism seems to have made but little progress, and, with the exception of attacks of neuralgia in the face and head, and a chronic cough which troubles her every winter, she has been in good health since. She gave up the instrument more than ten months ago. Before she began to use it, a surgeon of great experience told me he expected the external tumor would burst in a day or two, and Dr. Laycock was of the same opinion. Of course, I cannot hope to avert the fatal termination we must always expect in thoracic aneurisms; but I am convinced, and so is the patient, that

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the compression of the vessels beyond the aneurism was attended with marked benefit, and was the direct cause of its hardening and subsequent rapid decrease in its size.

As far as I am aware, this mode of treatment has not been tried on any previous occasion.—*London Lancet.*

2. *On the Radical Cure of Reducible Hernia, by Seton introduced along the Inguinal Canal—with Cases.* By J. M. CARNOCHAN, Professor of Surgery in the New York Medical College, Surgeon in Chief to the State Hospital, &c. &c.

ABOUT a year ago Dr. Riggs of this city presented an instrument to me, constructed for the purpose of introducing a seton or tent along the inguinal canal: this instrument, shaped somewhat like the trocar, used for tapping the bladder through the rectum, was composed of a hollow tube of silver, having its anterior extremity made slightly bulbous; along the hollow tube was a sliding stylet, with a ring at one extremity to serve for a handle, while at the other extremity was placed an eye large enough to receive the ordinary sized seton. The instrument seemed well adapted for the purpose, and was used by me in the treatment of hernia, by this method, in the following cases.

The frequency of hernia and its inconveniences and dangers, have engaged the attention of several eminent surgeons during the present century; and more recently we find the names of Gerdy, Bonnet (of Lyons), Belmas, Guerin, Jobert and Wûtzer associated with operative procedures, projected for the purpose of effecting a radical cure of hernia. Each of the plans proposed by these eminent authorities have been put into practice, but none of them have been attended with success sufficient to obtain a general sanction or adoption. Wûtzer's operation, perhaps the best of these different procedures, and for a time considerably in vogue in Germany, has fallen almost into disuse, partly owing to the dangers attendant upon it, and partly owing to its failure in effecting the object it is intended to accomplish. I have had frequent opportunities of trying the operation of Gerdy as well as that of Wûtzer, but generally without a satisfactory result.

The introduction of a seton or tent into the inguinal canal, for the purpose of creating irritation and effusion of plastic material along its course, appeared to me to be worthy of trial, and the results of six cases are given below, as taken from the hospital books.

The operation resorted to is performed as follows: The



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patient lying down, with the buttocks slightly elevated on the side to be operated upon; the surgeon places the left index finger on the anterior portion of the scrotum, about two and a half inches below its origin, pushes back the scrotum and hernial sac from below, upwards, through the external abdominal ring along the inguinal canal as far as a point opposite the internal abdominal ring, leaving behind the spermatic cord; the hernial needle, guided by the finger, is now pushed upwards, in the same direction, to the bottom of the cul-de-sac thus formed; the handle of the instrument is then slightly depressed, and the point of the stylet is brought out in front so as to traverse at the same time the scrotum, thus pushing back the anterior wall of the canal and the skin of the abdominal parietes; as soon as the eye of the stylet is seen outside, it is threaded with strong ligature, which is knotted so as to form a loop from four to six inches in length; a seton about the size of the ordinary skein of silk, imbued with the tincture of iodine, is doubled round the loop, and is thus engaged. The stylet is now drawn backwards into the canula. The instrument is now withdrawn, carrying with it the loop of ligature downwards along the inguinal canal, and through the external inguinal ring; the loop of ligature is now detached from the eye of the needle, and by it the seton is pulled downwards, in the same direction, into and along the inguinal canal and hernial sac.

Case I.—Aloys Lechner, a native of Germany, 47 years of age, was admitted into the State emigrants' hospital, April 1st, 1857, for an inguinal hernia on the right side, about the size of a hen's egg, which had recently passed down the inguinal canal into the scrotum. It had attracted his attention about one year previous to this date. On May 2d, Professor Carnochan performed an operation for the radical cure of hernia, by introducing a seton or tent into the inguinal canal. At the end of 48 hours the seton was withdrawn, and a light truss applied. For about one week, a few drops of water passed each day from the wound; the patient felt no pain whatever during this time. He remained in the recumbent posture four weeks; at the end of this time it was found that the upper part of the canal was entirely closed. A few days after leaving his bed, he laid aside the truss and walked about, stating that he had no further use for any such instrument. No hernia returned.

In the latter part of July he complained of pain in the region of the stomach and abdomen; he was transferred to the medical department, where he died on the 9th day of September, of tuberculosis of the lungs.

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A post-mortem examination was held. Upon opening the cavity of the perineum, no orifice to the hernial sac could be seen; the internal ring was entirely closed; a small rounded body of a yellowish color was found closing the ring, and situated on the outer side of the perineum, just below the situation of the internal ring. This may have been the remains of the hernial sac. The upper portion of the inguinal canal, for about an inch, was closed by plastic exudation, which had become organized and somewhat fibrous in appearance. The lower part of the inguinal canal and the external inguinal ring was natural; the cord appeared to be imbedded in a plastic formation. No hernial sac was visible; it is probable that it was pushed up into the cavity of the abdomen during the operation, as the hernia was of recent occurrence.

Case II.—Henry Scholz, a native of Germany, 16 years of age, was admitted into the hospital July 17th, 1857, for an inguinal hernia on the right side, of two years' standing; it was not very large, but extended along the whole course of the canal, and descended into the scrotum; the finger was easily passed into the external abdominal ring. On the 1st of August, a seton, about 4½ inches in length, containing ten double threads of silk, was introduced along the inguinal canal. At the end of 48 hours it was removed. August 7th, the wound had closed; but very little lymph was effused. He remained in bed for about four weeks; when allowed to get up he wore a weak truss for about a fortnight; after this, the truss was dispensed with, and in ten days left the hospital, much improved, with a small hernial projection opposite the internal abdominal ring.

Case III.—Justinius Herbel, a German, 26 years of age, was admitted into the hospital September 30th, 1857, with a hernia on the left side descending into the scrotum, and as large as a turkey's egg; the external inguinal ring was very large. A seton was introduced November 11th, 1857, and was removed on the second day; the subsequent effusion of lymph was very large, and extending along the whole length of the inguinal canal. He was kept four weeks in bed; gentle pressure, by means of a pad and bandage, was applied over the inguinal canal; after this, he was allowed to get up and walk about, wearing a weak truss for about six weeks. The truss was then dispensed with. At the end of three weeks he was discharged from the hospital, cured, without any appearance of hernia.

Case IV.—Christian Luden, a native of Switzerland, aged 40 years, was admitted into the hospital October 15th, 1857,

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with a double inguinal hernia, of three years' standing. On the left side the external inguinal ring was large, measuring an inch and a quarter in diameter. The hernia on this side was as large as a hen's egg; the inguinal ring is also very large on the right side; the hernia on this side is as large as a man's fist.

The operation was performed November 20th, 1857, by introducing a seton of silk imbued with the tincture of iodine; this was removed 48 hours after; the exudation of lymph was not large. The same operation upon the right side was performed on the 23d of January 1858, using an elongated piece of compressed sponge, imbued with the tincture of lyttæ, instead of the silk. The sponge was removed on the second day. A considerable discharge of pus followed the removal of the seton in each instance, and continued for about ten days. The effusion of lymph along the canal of the left side was considerable. This was also the case on the opposite side. A slight pressure was maintained upon the inguinal canal after the removal of each seton. At this date (February 13th) he is still under treatment, and keeps the recumbent posture; when made to walk about the ward for examination, the hernia does not reappear; the inguinal canals on either side appear to be blocked up.

Case v.—John Carsten, a native of Switzerland, aged 48 years, was admitted into the hospital August 23d, 1857. This patient is subject to frequent attacks of violent laryngismus and spasm of the diaphragm. He has had a large scrotal hernia during the last fifteen years on the right side, as large as two fists placed together; the external inguinal ring was very large. A seton of compressed sponge was introduced along the inguinal canal on the 23d of January 1858, which was removed on the second day after; but little suppuration followed; the effusion of lymph along the cord was considerable; the usual pressure along the inguinal canal was applied during the last three weeks.

Since the operation he has had frequent attacks of laryngismus, which have always thrown the abdominal muscles into violent action; from this cause the hernia had reappeared in the canal, but does not descend into the scrotum. Before the operation this hernia could not be kept up with any form of bandage or truss, although reducible.

He is still under treatment, and keeps the recumbent posture.

Case vi.—George Schaffer, a German, 53 years of age, was admitted into the hospital December 17th, 1857. This patient has had a scrotal hernia on the right side for more than

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twenty years; he has worn a truss, but it was impossible to keep back the hernia on account of its size, (the tumor is about as large as a fœtal head,) and when reduced the external inguinal ring was found to be about an inch and a half in diameter. On the 30th of January a seton of silk, imbued with the tincture of iodine, was introduced along the inguinal canal; on the second day the seton was removed; a slight discharge of pus continued for two days after the operation; the effusion of lymph around the cord was considerable. At this date, February 14th, (two weeks after the operation,) the patient is still under treatment, keeping the horizontal position, and having slight pressure, with a pad, applied over the inguinal canal; while standing or walking the hernia does not reappear.

3. *Treatment of Hernia by Wutzer's Apparatus.* By ARTHUR J. CUMMING, ESQ. M. R. C. S.

A boy, 12 years of age, was admitted an out-patient of the Exeter dispensary in the beginning of this month, with a very large scrotal hernia (congenital), a bad cough, and rather weak intellect. He was fitted by a good trussmaker here, and although the truss was very strong, the hernia could not be kept up. On the 8th instant, I applied Wutzer's apparatus, which was kept on until the 14th instant, when the parts became painful, and inclined to suppurate; I therefore removed the plug and applied the truss, which before had failed to keep the rupture up. During the removal of the apparatus the boy coughed and cried violently, but the parts remained firm, and continue to do so.

I have now little doubt a cure is effected. There has been no constitutional derangement, and comparatively little pain.

I think an important part of the operation is to get the plug well beyond the internal ring, so that the needle may hold some of the tendinous fibres.

This appears a very good trial for the apparatus. I will communicate further, should there be any return of the hernia.

4. *Case of Trismus Nascentium, ending in Recovery.* By H. L. BYRD, M. D., Professor of Principles and Practice of Medicine, in Oglethorpe Medical College.

Professor Byrd states that, in a practice of sixteen years, he has seen over thirty cases of trismus nascentium, all of

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which terminated fatally, with the exception of the single case now reported. The child, a negro, was attacked eight days after birth. The case presented no unusual features. The treatment consisted of flaxseed poultices over the abdomen; enema, containing a drachm of castor oil and ten drops of the spirits of turpentine, and five drops of spirits of turpentine and paregoric, given by the mouth every two hours. The latter was given irregularly, owing to the spasms. On the fourth day, the symptoms being improved, one-fourth of a grain of the sulphate of quinia was given every three hours, alternating with eight drops of the spirits of turpentine. The reporter attributes the recovery mainly to the spirits of turpentine.—(*Charleston Med. Journal and Review.*) *N. A. Med. Chir. Rev.*

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## MEDICAL JURISPRUDENCE.

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*The Condition of the Lung not invariably to be depended on, as a proof that the Infant has been born alive.* By Thos. Williamson, M. D., F. R. S. E., F. R. C. S. E., Physician to the Leith Hospital.

In a medico-legal point of view, all fresh cases bearing upon the important subject of infanticide should be carefully recorded.

During the past eighteen or twenty years of a somewhat extensive midwifery practice, five or six instances have occurred to me, which go far to establish the correctness of the remarks of Dr. Taylor, in his work on Medical Jurisprudence, when referring to the extreme caution and care which ought to be observed by medical men in forming an opinion as to the cause of the infant's death. The mere proof, derivable from the condition of the lung, that the child has respired, is by no means per se sufficient to establish the fact that it has been born alive. In writing upon this subject, Dr. Taylor says, "Mr. Price has communicated to the Medical Gazette the account of a case, in which the cord was so tightly twisted around the neck of a child, that he was compelled to divide it before delivery could be accomplished. There was in this case a deep groove formed on the neck, and it conveyed the impression to himself and a

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medical friend that, in the absence of any knowledge of the facts, they would have been prepared to say that the child had been willfully strangled by a rope. In this instance, the cord was very short."

In all of my cases, I was under the necessity likewise of dividing the cord previous to the birth of the infant. Had I failed in doing so, life would have been inevitably destroyed; and had a stranger to the history of the cases been called upon to institute a post-mortem examination, he must have arrived at the conclusion that these infants had been born alive.

Immediately upon the birth of the head, in the instances which have occurred to me, the infant has respired freely, but upon running the finger round the neck, one or more loops of the cord have been found firmly encircling the throat. In all similar cases, generally speaking, little or no trouble is experienced in at once disengaging the coil of cord, and thus permitting the almost simultaneous propulsion of the shoulders; but, in the instances referred to, owing to the extreme shortness of the umbilical cord, this manœuvre was found utterly impracticable. Each succeeding contraction of the uterus was found to tighten and constrict the umbilical ligature still more and more; respiration ceased, and the face of the infant became black and congested.

Sometimes I have succeeded, with much difficulty, during the interval of pains, in slipping a double ligature around the cord, and severing it at random; at other times, I have been necessitated to divide the cord without any such precautionary measures, dreading alike mischief to the mother and child, and running all the consequent risk of fatal hemorrhage, at least to the infant. I may mention, that the umbilical cord rarely exceeded sixteen or eighteen inches in length, and had effected a deep indentation around the neck of the child. In the last of my cases (which occurred within the past few days), shortly after the birth of the infant, upon proceeding to remove the placenta, I discovered that it was firmly retained; the uterus having assumed the hour-glass form of contraction, and refusing to dilate again without the previous administration of a large opiate. Was not this nature herself stepping in to prevent the serious displacement of the uterus, the placenta being still undetached from its fundus, whilst the suffocating infant was struggling to get free?

In certain instances of suspected infanticide, which will at once occur to the mind of every one, it must be obvious

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how very damaging to the accused is the fact, when brought out by post-mortem examination, of respiration having been fairly established. The ordinary inference, where, from the state of the lungs, this process has been proved to have existed, is, that the child must have been born alive. Had the cases, however, to which I have referred, been left to themselves, the infants would have been born dead, with an indented groove encircling their necks; and yet a post-mortem examination would have revealed all the indications usually regarded as conclusive proof that they had been born alive. Hence, then, the necessity of great caution in forming an opinion of the cause of death in all such cases.—*Edinburgh Med. and Surg. Jour.*

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# EDITORIAL AND MISCELLANEOUS.

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## *Radical Cure of Hernia.*

A SAFE, speedy and permanent method of relieving hernia, would undoubtedly be regarded as one of the greatest improvements in the province of surgery. It is not strange, therefore, that this subject is constantly occupying the attention of surgeons, and that novel suggestions and experiments are being frequently made, in the endeavor to gain this desirable result. Among the most recent and really practical articles on this subject, is the interesting lecture of Mr. Wells of London, which appears in our present issue, and we recommend its careful perusal to our readers.

Amidst the many triumphs of modern surgery, we can but wonder that so little has been done towards the radical cure of hernia. According to careful statistics, not less than one in twenty of our population is afflicted with this misfortune.*

In the United States, then, we may assume the number

* Vide Malgaigne's Lectures and the Observations of Astley Cooper and others. Va. Med. Journal, vol. iii, p. 42.

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to exceed *one million*, and we can imagine with what eager gladness this immense class of the community would resort to any mode of permanent relief, whose success had been sanctioned by time and experiment. Such a brilliant prize is indeed an inducement to the profession to think seriously and long upon any proposition which promises such a result. We therefore regard with great interest the modifications of the method of radical cure by invagination, first suggested by Gerdy, improved by Wutzer, and practiced by the last named surgeon and Rothmund on the continent, and by Wells and Erichsen in England. We also direct the reader's attention to the operation as performed by that promising American surgeon, Dr. Carnochan of New York, whose experiments with the seton in this connection, are published in our pages.

Sooner or later the successful cure of reducible hernia must be achieved. Its victims are numerous, the magnitude of the interests involved so large, and we will also add, the difficulties in the way too small, to make us doubt the fact. In an age, when we do not hesitate to grope amongst the vitals for the largest artery and tie it successfully, or to extirpate enormous abdominal tumors, or overcome the most horrible deformities by the dexterous use of the anaplastic method, we have a right to assume that a cure for hernia will also be discovered. Ask any one, not familiar with the history of surgery, which is the most difficult of execution, to obliterate a small opening in the abdominal walls, or to cut a stone from the bladder, and what answer would we expect? Yet the operation for stone is practiced with increasing success every where, while we still offer no remedy for the simpler malady.

Again—hernia has been radically cured many times. We know precisely what the process is. We know by observing the results of the operation for strangulated hernia, that in a large proportion of cases the inflammation following upon the operation results in an obliteration of the opening.

It is also found that inflammation in the neck of the her-



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nial sac, no matter how produced, will result in a radical cure. Thus, a truss, by long continued pressure on the inguinal ring and hernial sac, occasionally cures, and hence the attempt has been made to cause the desirable inflammation at this point by *injections into the sac*, an operation which, we regret to say, has been too much neglected. If we do not fear to throw the iodine solution into the pleura or pericardium, into ovarian cysts, or even into the peritoneal cavity, why should there be any hesitation in using the remedy for the radical cure of hernia?

The whole subject is full of interest to the profession and to the public. The frequency of this disease amongst the negro population renders the question one of importance in a money point of view. Not less than *one hundred and fifty thousand negroes* are afflicted with hernia.*

A successful remedy for this affection would add *twenty millions* to the present value of this species of property, besides greatly increasing its productive force. Are we wrong then in declaring that a successful and radical cure for hernia would be the highest achievement of surgery?

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## *The New Specific for Consumption.*

As long as consumption sweeps with its resistless force through the world, taking away the most beautiful and the bravest—the brightest eye, the rosiest cheek only leading us to tremble lest we looked on the trail of the serpent—so long will a new "specific for consumption" attract the attention of the profession and the public. However unreasonable are the claims of the novel remedy, no matter how much the common sense of every observer of this disease may be violated by its extravagant pretensions, still the love

* The estimated proportion in the white population of France, England and the United States, is as 1 to 20. The disease is undoubtedly more frequent with the negro—but the same proportion would give the number as stated above.

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of the marvelous, characteristic of human nature, will tempt many, who ought to know better, to run with avidity after any new method of cure.

This oft repeated scene is now being enacted in our country. "A specific" for consumption is announced in all the journals—proposed and recommended by one of the most honored names in British medicine. The pharmaceutists diligently prepare beautiful chemicals and palatable syrups, and every druggist announces to the credulous public, "*Churchill's Specific for Consumption.*" Meantime the doctors, not always unwilling to mount on the back of a popular hobby, are going their daily rounds, armed with a bottle of "*the syrup of the hypo-phosphites.*"

We are surely not desirous to check any reasonable effort to introduce new agents into the materia medica, or to underrate any suggestions tending to promote the public welfare or the improvement of the medical art, and while we do not wish to prevent the use of the hypo-phosphite salts, as recommended by *Dr. John Francis* Churchill in the cure of phthisis in all its stages, we think it right to apprise our readers of the history of this "specific" up to the present date, by referring them to the abstract of Dr. Churchill's paper, submitted to the French academy of medicine, and also to Dr. Cotton's experiments at the Brompton consumption hospital—both of which articles will be found in this number.

It would seem that Dr. Churchill (*not* the eminent author and worthy successor of Montgomery in the Dublin school), emulous of Dr. Fell's successes in the cancer way, proposed to use a *secret* remedy for consumption at the Brompton hospital. This proposal was refused by the managers of that institution; and failing in this project, Dr. Churchill offers a paper to the French academy, detailing his wonderful success from the use of the hypo-phosphite salts in the treatment of phthisis. This communication was laid before MM. Trousseau, Bouillard and Louis, as a committee on the part of the academy, who have not yet reported; but the result

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of the experiments at the Brompton hospital, made under the direction of Dr. Cotton, published in this number of the Journal, are not calculated to increase our confidence in the power of the new agent. There is, however, something attractive in the proposition to introduce phosphorus, in a form easily assimilable, into the system. We may *theoretically* expect much from an agent holding its important position in the human organism, and we therefore might expect to find the "specific" at least useful as a nervous tonic, and probably a good blood-maker in anemic conditions of the system.

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## *Paris Hospitals.*

THE care of the sick and the alleviation of their sufferings are duties of which no great society can be unmindful. Poverty and disease always work beneath the skirts of prosperity in large cities. Humanity suggests attention to their claims; security demands it, if only in the interests of public health. We have lately afforded an appreciation of the numerous institutions, the liberal funds, and the devoted services, which private generosity places at the disposal of the pauper sick of London. Documents recently published afford the means of a like analysis of the charitable resources of Paris. This we shall attempt, from time to time. Sixteen hospitals permit the reception of 7,000 diseased persons at the same time in that city, while they employ the energies of 67 physicians and 38 surgeons, the most illustrious members of the medical body. Fifteen dispensers, 179 house surgeons, and an army of dressers, are here engaged in the same sacred duties with their seniors. In addition to these, there are employed in these hospitals 22 chaplains, 774 nurses, and 409 general servants. The annual expense amounts to 5,500,000 francs, and more than 100,000 patients are annually admitted. The impressive vastness of these figures enforces thought.

The splendid munificence of such a system must be admired. The mercy which makes so vast a concession to the cure of the wounded is of a quality not strained:

> "It droppeth as the gentle rain from heaven
> Upon the place beneath: it is twice blessed—
> It blesseth him that gives and him that takes."

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The devotion of the most illustrious of our brethren to this holy labor earns for the class whom they represent a proud title to esteem, whilst it brings with it the enviable consciousness of a high duty well performed. Such charity is nobility's true badge.

But the philanthropist is here also a patriot. No one can say how much of the longevity in great cities is due to the separation of the sick from the healthy. A little leaven leaveneth the whole. An infinitely smaller number of sick may well become centres of wide spreading circles of disease. The state, too, suffers, wherever disease becomes endemic, or when its ravages are feebly or unskilfully stayed. The deterioration of race—the degeneracy of physical power—the enfeeblement of body, at least, which necessarily result, inflict an economic loss. Every case of preventible disease presents a public loss. So also does each case of neglected illness or prolonged convalescence in the laboring man; for

> "Infirmity doth still neglect all office
> Whereto our health is bound."

Thus medicine claims a position in the calculations of the political economist, and the physician rises to the highest rank amongst practical statesmen.—*London Lancet.*

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## *Royalty on the Sick List.*

The bed of royalty is at best but a thorny couch, and the "head that wears a crown" lies no easier than that which carries an orange basket. Poets delight to tell how death and disease beat with equal foot at the door of the cottage and the palace. Court physicians confirm the tale. Just at this time it would seem that the kings of Europe are below the average of health which prevails amongst their subjects. The winter has been so unusually mild that the health of the people stands more than commonly high, while half the crowned heads of Europe have been on the sick list. The king of Prussia is suffering from a severe cerebral affection, for which no favorable issue can hardly be anticipated. The grand duke Ludwig of Baden, who has long been under strict medical surveillance, died last week. The king of Sweden, slowly recovering from a severe illness, was thrown

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back by an attack of fever early last month, from which he is once more convalescent. The king of Wurtemburg is reported to be fast breaking; he recently suffered from an attack of "grippe." Finally, the grand duke of Weimar is invalided by an attack of cynanche tonsillaris, accompanied with influenzal fever. Such a list affords ample food for the moralist. It will inspire regret in the minds of the loyal subjects of those monarchs. The democrats, influenced by other feelings, will be tempted to exclaim, "*O si sic omnes.*"

*Lancet.*

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## *Life of Dr. Baynham.*

WILLIAM BAYNHAM, ESQ. surgeon, was the son of Dr. John Baynham of Caroline county, Virginia, and was born in December 1749. After having devoted five years of his early life to acquiring the elements of his profession under the auspices of Dr. Walker, at that time considered as one of the most eminent surgeons in America, and thus by a regular and laborious apprenticeship laid that foundation for future eminence, which unfortunately by too many is deemed unnecessary, he was sent by his parents or guardians to complete his education in London in 1769, where he entered as a student at St. Thomas' hospital.

Here he soon acquired the notice of Mr. Else, the professor of anatomy, which ripened into a reciprocal attachment that continued through life. Under his direction he became particularly attached to the study of anatomy and surgery, and by application and perseverance he soon acquired a complete knowledge of both these departments of science. He was remarkable for unwearied and minute attention and diligence in every thing he attempted, and thereby ensured success if at all attainable. As a proof of his early anatomical knowledge, it may be mentioned that he was employed in 1772 by the professor of anatomy at Cambridge to dissect and prepare the subjects for his lectures. Mr. Baynham continued to assist the professor in his dissections, &c. for several winters, and in the remaining part of the year was a partner of Mr. Slater, an eminent surgeon of Margate, which was a very profitable and agreeable connection, as appears from some observations in Mr. Baynham's own handwriting. Whilst he was in this situation he received an invitation from Mr. Else, the distinguished professor of anatomy at St. Thomas', to return to London and become his assistant demonstrator. A proposition so flattering and apparently so advantageous, was immediately acceded to by Mr. Baynham, with the consent of Mr. Slater, who, however, wishing to retain him, offered him an equal share in the partnership.

Mr. Baynham engaged with Mr. Else on the following terms: he was to superintend the anatomical theatre and dissecting room, prepare the bodies for his public demonstrations, make preparations for the museum, and to instruct the pupils in the art of dissecting, injecting, making anatomical preparations, &c. with a salary of eighty and ninety pounds the two first years, and one hun-

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dred pounds a year for five succeeding years; at the expiration of which (having qualified himself in the interim for the office) Mr. Else was to relinquish to him the professor's chair, or to take him as joint professor on equal terms, as he (Mr. Baynham) might choose. Having returned to St. Thomas' he pursued his occupation with unremitted assiduity, and thereby acquired that minute knowledge of anatomy for which he was so justly celebrated. He prepared for the museum more than three times the number of rare and valuable preparations which he found there. Their connection continued five years, at the end of which time Mr. Else died suddenly of an apoplexy, without making any preparation for him as his successor. Mr. Baynham was even an entire stranger to the governors of the hospital, in whom was vested the power of appointing a successor to the late professor. His reputation as an anatomist and surgeon, however, was so well established, that when the election was made, his opponent obtained the appointment by one vote only, and that because two of Mr. Baynham's friends were absent.

Mr. Else bequeathed to him the museum by his will at the price of six hundred pounds, which he afterwards sold to Mr. Cline, who obtained the appointment, for eight hundred pounds; reserving to himself some very beautiful and valuable preparations which were on hand and unfinished at the time, and which, with others occasionally made by himself, were sold for one hundred guineas to Mr. Blizard, professor of anatomy in the London hospital. Among these was a very fine preparation of a testis, beautifully injected, which satisfactorily decided the long disputed question between Else, Pott, Hunter, and others, whether in the operation for hydrocele by caustic as performed by Else, the cure was effected by adhesion, or by a total destruction of the tunica vaginalis, as was asserted by Else. In this case the caustic was applied in his ordinary way by Mr. Else, and, the patient having died of another disease, Mr. Baynham dissected out the parts and injected them by the spermatic artery with a very fine injection colored with vermilion. The tunica vaginalis was much thickened, but otherwise perfectly sound in every part, except where the caustic had acted; and every appearance clearly demonstrated the actual existence of what Mr. Hunter termed adhesive inflammation, and, conjointly with the appearance of soundness in the tunica vaginalis, established the fact beyond a doubt, that the cure is performed by adhesion, and not by the destruction of the sac.

Mr. Baynham injected and demonstrated a fine vascular membrane on the surface of the cutis immediately under the rete mucosum, separate and distinct from the cutis, and capable of separation from it throughout its whole extent. Dr. William Hunter was satisfied of this fact from the preparations which were made and shown to him, expressing his surprise by saying, "what have we been doing so long, that we never observed this before?" Mr. Cruikshanks was then about to publish his observations on the absorbents, and proposed to attach an account of this discovery to his book, which was agreed to; and in that book is the only notice of it which the writer of this has seen, except one apparently taken from the same source in Wistar's Anatomy. The account given by Cruikshanks is a gross misrepresentation, and an attempt to confound this with that part of the cutis he had been operating upon to discover the seat of the variolous pustules. He presented a copy of this work to Mr. Baynham, which has on its margin various remarks in his (Mr. Baynham's) writing, expressing his

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indignation against the author for so doing, and clearly marking what he ought to have published. This membrane explains the seat and appearance of erysipelatous inflammation, the cure of it by blistering, and the probability that scarification through this membrane would arrest its progress, and accounts for the progress of superficial gangrene being stopped by a blister applied above it.

On the 7th day of June 1781, Mr. Baynham became a member of the company of surgeons of London (which is to the surgeon what the degree of M. D. is to the physician) and commenced the practice of surgery in London, and probably continued to do so while he remained in that city. Having resided sixteen years in England, Mr. Baynham returned to his native country, and shortly after settled in Essex, where he continued until his death, which took place on the 8th of December 1814, having the day before completed the 66th year of a life which had been actively and usefully spent in the pursuit of a laborious profession, and in the service of his fellow-creatures. It is not to be wondered at that having laid such a solid foundation, and brought with him so distinguished a reputation, he should immediately obtain an extensive practice, and support and even augment his celebrity. To enumerate the different operations upon which his reputation rested, would be surperfluous; many are already known to the public, and especially to medical men. There is scarely any difficult operation in surgery which he did not perform, and with almost invariable success. He particularly signalized himself by several operations for stone, cataract and extra-uterine conception. A detailed account of a case of the latter may be seen by reference to the New York Medical and Surgical Journal.

It is no small proof of the superior merit of Mr. Baynham, that, notwithstanding the obscure and confined theatre of his practice, his talents hidden as they were in some measure from the public eye by the seclusion of a country life, and restricted by a limited population, he acquired a reputation quite as splendid and almost as extensive as any of those eminent surgeons, who possessed, for the display of their abilities, the advantage of populous cities and conspicuous official stations. He was frequently sent for to our large cities and sometimes even into other states. He was applied to for advice by persons living in remote parts of the Union, and had patients attending him at his own residence who were brought thither by his fame to obtain the benefit of his skill. As a surgeon, it is probable that Mr. Baynham had no superior; as an anatomist, it is certain that he had none. The most ample testimonies exist to prove the respect in which his talents have always been held both in Europe and America. He is always mentioned by the several professors of anatomy in our universities in their lectures with the greatest respect, and we have heard a distinguished teacher assert that he considered him in the art of making anatomical preparations only second to Ruysch. One remark I will add, says his biographer, which is that Dr. Physick and Mr. Baynham are the only persons whom I know in America that have really improved the surgical profession. It has been falsely supposed by some, who were probably misled by his great surgical reputation, that he was not eminent as a physician. But if success can be assumed as a criterion of excellence, he deserved the highest credit in the latter character; and accordingly it has been awarded him by the suffrages of those who had the best opportunity of judging of his merit, his own patients. To the superficial observer, who measures the altitude of the mind by the vibrations of the tongue,

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and considers fluency and eloquence of discourse as the only unerring criterion of talents, he could not have appeared worthy of his high reputation. He was slow and not very distinct in the enunciation of his ideas. Entirely unambitious of ornament, talking only to be understood, and never for effect, despising the prismatic glare of factitious refinement and exaggerating declamation, by which the feebleness of the idea is so often concealed beneath the splendor of the dress, it is not to be wondered at that he seldom made a favorable impression on strangers, and that he generally on first acquaintance disappointed those whose expectations had been raised, and whose opinion of him had been formed from the report of fame.

We now approach that part of his character which to himself and to his posterity is of infinitely more importance than all the fame and all the favors which the world can bestow, his moral worth, his merit as a man and a member of the great human family. In most of the relations in which Mr. Baynham was connected with society, he discharged all his duties in an unusually exemplary manner. That he had some eccentricities of temper must be confessed, but that they have been exaggerated by malicious observers is also true. With an exterior somewhat gloomy and austere, he possessed the kindest and most philanthropic feelings—indeed few men had naturally warmer hearts. In him the poor ever found a friend and benefactor ready by the humane offices of his skill to assuage the pangs of bodily disease, or by his beneficent liberality, which sometimes bordered even on munificence, to relieve them from the equally cruel pangs of poverty.

He was one of those very few men, says another writer, whose loss will be a public misfortune, for I know not who is to succeed him in Virginia as a surgeon. In his profession he was second to Dr. Physick only, and nothing but the most narrow, inveterate and malignant jealousy could asperse his medical reputation. He was a member of the Royal college of surgeons, and consequently had the same standing in the profession as Pott, John Hunter, Cooper and Abernethy. In the dissecting room he was pre-eminent, being unquestionably the best practical anatomist in Great Britain. The best preparations in the museum of Messrs. Cline and Cooper were made by him; one particularly of a female breast, it is supposed, has never been equaled.

His name is mentioned in anatomical works as the discoverer of the vascularity of the rete mucosum. In the first volume of the Medical and Philosophical Journal and Review, printed in New York, is a paper of Mr. Baynham, containing an account of an operation which he is supposed to be the first to have performed successfully, and in the Philadelphia Journal of the Medical and Physical Sciences are to be found many posthumous publications of surgical cases, which reflect the highest honor on his talents and character.—*Philadelphia Journal of Medical and Physical Sciences, vol. 4.*



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# VARIETIES.

RAIN DOCTORS.—In the interesting book of Travels in South Africa, by the medical missionary, Dr. Livingstone, we notice the following amusing account of the rain doctors. He says:

There are specialists amongst them who undertake management of refractory clouds, and call themselves rain doctors. Seeking to point out the absurdity of such doings to one of these gentry, Dr. Livingstone received the following answer:

"I use my medicine, and you employ yours; we are both doctors, and doctors are not deceivers. You give a patient medicine. Sometimes God is pleased to heal him by means of your medicine; sometimes not—he dies. When he is cured, you take the credit of what God does. I do the same. When a patient dies, you do not give up trust in your medicine; neither do I when rain fails."

THE PUBLIC HEALTH.—The week has been signalized by the opening meeting of the National association for the promotion of social science. Lord Stanley, president of the department of public health, gave an excellent address. The concluding portion is too good to be lost.

"Dry and unattractive as sanitary studies may appear, they belong to the patriot no less than the philanthropist; they touch very nearly the future prosperity and the national greatness of England. Don't fancy that the mischief done by disease speeding through the community is to be measured by the number of deaths which ensue. That is the least part of the result. As in a battle, the killed bear but a small proportion to the wounded. It is not merely by the crowded hospitals, the frequent funerals, the destitution of families, or the in creased pressure of public burdens, that you may test the suffering of a nation over which sickness has passed. The real and lasting injury lies in the deterioration of race, in the seeds of disease transmitted to future generations, in the degeneracy and decay which are never detected till the evil is irreparable, and of which, even then, the cause remains often undiscovered. It concerns us, if the work of England be that of colonization and of dominion abroad—if wild hordes and savage races are to be brought by our agency under the influence of civilized man—if we are to maintain peace, to extend commerce, to hold our own among many rivals, alike by arts and arms—it concerns us, I say, that strong hands shall be forthcoming to wield either sword or spade—that vigorous constitutions be not wanting to endure the vicissitudes of climate and the labors of a settler in a new country. I believe that whatever exceptions may be found in individual instances, when you come to deal with men in the mass, physical and moral decay necessarily go together; and it would be small satisfaction to know that we had through a series of ages successfully resisted every external agency that if we learnt too late that vigor, and energy for which ours stands confessedly pre-eminent among the races of the world were being undermined by a secret but irresistible agency, the offspring of our own neglect, against which science and humanity had warned us in vain."

PHRENOLOGY.—When Dr. Spurzheim had finished an examination of the Ettrick Shepherd's cranium, the latter summarily disposed of the "science:" "My dear fellow, if a few knots and swells make a skull of genius, I've seen many a saft chiel get a swapping organization in five minutes at Selkirk tryst."

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VIRGINIA

MEDICAL JOURNAL.

MAY 1858.

ART. I.—*The Pathology and Treatment of the Paralysis of Motion.* By J. P. BATCHELDER, M. D. of New York. (Concluded.)

## ADDITIONAL REMARKS.

### *Time of Attack.*

PARALYSIS, like apoplexy and epilepsy, not unfrequently attacks during the night, while the patient is in bed, and after sleep. The recumbent posture, and the consequent distention of the cerebral capillaries, and the pressure which they make on the nervous centres (the proximate cause of sleep, we think), seem to favor and invite the attack; and we shall often find, on enquiry, that if the subject be a male, the accession has been preceded by masturbation or a coitus.

### *Particular Symptoms.*

*Sense of coldness*—taken in connection with other premonitory symptoms, is particularly significant—indicating a tolerably certain and near approach of the disease; and when it begins to abate or be exchanged for a sense of warmth, it presages a favorable termination. Either way, it is a symptom of prognosis—otherwise, it is not particularly impor-

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tant. It seems to be somewhat idiopathic; for it obtains as well when the paralyzed limb is red and tumid as when it is pale and shrunken. In the first instance, when the hand, for example, begins to grow warm, the tumefaction and redness likewise begin to subside, and entirely disappear when the member assumes its natural temperature. In the second instance, when the warmth returns, the limb resumes its natural size and color.

*The sense of numbness* is the most common of all the premonitory symptoms. It is indeed seldom absent, and is sometimes attended with a sense of fullness, and occasionally with some degree of tumefaction. It generally affects the patient when at rest—warm in bed—towards morning.* As a premonitory symptom, it primarily affects the peripheral brain, and indicates that the ultimate nerve fibres, in the part where it is experienced, are compressed. This compression is induced in the following manner: The capillary vessels of the part, having from some cause or other become less susceptible to the stimulus (that of distention only, perhaps,) of the fluids which they circulate, do not resist; but yield to the ingressive impulse of those fluids until they (the vessels) become so distended as to compress these termini (ultimate fibres); by which compression this numbness or obtuseness of feeling is occasioned. The remedy is exercise, which transfers the fluids from the sentient papillæ to the muscular tissue, and affords relief as prompt as it is certain. Like other premonitory symptoms, it frequently precedes a storm or falling weather. In this respect an analogy obtains between these symptoms and the pains and aches, of which patients, subject to gout or rheumatism, or who have suffered from severe accidents, are so apt to complain. Under such circumstances, the cutaneous capillaries, and also those of the fibrous structures, unsustained by the pressure of the atmosphere (15 lbs. to the square inch), become preternaturally distended, and complain—the former discover-

* In this emergency, the patient should immediately leave the bed, and put his limbs in motion.

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ing numbness, the latter, the language of fibrous tissues in trouble. Now, in all these cases, no matter to what cause the pathological changes are owing, they may be speedily removed by exercising the muscles—often for a short time only. Almost every individual affected in this way has frequently found these feelings cease as soon as he got well engaged in the active business of the day. To such patients our advice has invariably been, to put the limbs in motion, and thus have seldom if ever been disappointed in obtaining the desired relief.

The analogy between this sense of numbness and that which is premonitory of age, is remarkable in two respects. Both are aggravated by atmospheric changes, and are likewise effectually relieved by exercise. Closely allied to the foregoing is

*The sense of drowsiness.*—The predisposed to apoplexy or palsy are liable to fall asleep. The tendency to do so is sometimes so strong as not to be resisted even in company. In the midst of lively conversation, perhaps in a half finished sentence, the unfortunate patient loses his consciousness for a moment. This sense of drowsiness, like the other premonitory symptoms, commences in the peripheral brain. This position, we admit, accords not with the generally received opinion, which is, that sleep results from changes first occurring in the encephalon or brain proper. As the postulate which we have assumed has an important bearing upon our theory, we deem it of consequence to have it settled on correct principles. To ascertain them, let us examine the phenomena of sleep. When drowsiness approaches, the face becomes flushed, and the eyes red; a sense of heaviness settles on the brows, and extends over the whole head, as the disposition to sleep increases. Presently the eye-lids close, the mouth opens, the saliva drivels, the jaw drops, and the head falls upon the breast. The process, more and more intensified, extends throughout the system, reaches and completely asserts its sway over that portion of the peripheral brain appropriated to the muscles of animal life, when the

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subject reclines, or sinks into the recumbent posture. But why, it may be significantly asked, does the central brain cease to act? We answer, simply because it has nothing to do—the avenues of thought and volition are shut and sealed. But this does not answer the question pathologically. What is it that renders sleep necessary? Activity—action of muscle and of mind—especially the former—which implies a contraction of the capillaries—not of the organs of motion only, but also of those of sense; which contraction is followed by a spontaneous relaxation, usually commensurate with the previous contraction. When this relaxation has gone on to a certain extent, the senses, closed against sensation, take no cognizance of changes, and consequently send no missions to the central brain, in which a similar condition has been subsequently, perhaps simultaneously effected, by which the functions of animal life are suspended. This state may constitute perfect sleep only; or more—profound coma. The first link in the chain of causation is, as has been suggested, an unequal distribution of blood to the ultimate or distal nerve fibres (peripheral brain) which compresses them; and the next, compression of the proximal extremities of the fibres of the same nerves.* If any of the capillary vessels, meandering in the vesicular substance† of the encephalon, give way, hemorrhage and apoplexy result.

* "Every nervous filament (and this is a fundamental point of anatomy) has its central extremity in the cerebro-spinal axis and its peripheral extremity at its point of termination."

* * * * * * * *

"Hence the central extremity of each fibre is connected with the peripheral extremity of a single nervous fibre only; and this peripheral extremity is in direct relation with only one point of the brain," &c. * * "So that, corresponding to the many millions of primitive fibres which are distributed to the peripheral parts of the body, there are the same number of peripheral points of the body represented in the nervous centres."—*Kirk & Paget*, p. 279–80.

(The reader will please excuse this repetition.)

† The vesicular nervous substance gives to the part, wherever located, the grayish or reddish appearance. It in fact constitutes the cineritious matter of the brain, &c. in which it is probable the nerve fibres terminate when they enter a nervous centre, or from which, in common anatomical parlance, they originate.

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This relaxation is an ultimate law of nature, and therefore inevitable. Hence "exhausted by watchings, the soldier slumbers at the cannon's side—the slave under the whip, and the criminal in the midst of torture;" and "sleep, tired nature's sweet restorer," must be had; but it is widely different from the premonitory drowsiness of which we are speaking—which is removed or counteracted by exercise. Every body is familiar with the utter incompatibility which exists between these two conditions—exercise and drowsiness.

*Vertigo and dizziness* is often a premonitory symptom of apoplexy or palsy of much importance. Taken in connection with others, likewise present, its import cannot be easily misapprehended. When it occurs, the patient either falls or inclines to fall—does so, or instinctively lays hold on some object for support. Having done this, and retaining his hold, he should put one or another of his limbs in motion, which we believe invariably removes the difficulty. Moreover, this symptom, like the others, is prevented by suitable exercise; which should be practiced by those much afflicted by it, a short time before leaving the house, because they are most liable to experience it when abroad, especially in a street or crowded thoroughfare. This is owing to the fact that people are in the habit of maintaining their equilibrium and perpendicularity by the sense of vision; and dizziness results when the sight is impaired, or rendered indistinct by a multitude of objects in motion. Upon the same principle, this symptom is often experienced when the perceptive powers of the retina are becoming less active. In which case, it should be regarded merely as a sign of general declension, incident to age. In such instances, individual perceptions are too indistinct to enable the patient so to adjust the action of the muscles in other parts as to maintain his equilibrium.

As these afflictions may be induced by various causes—by inordinate use of tobacco and other narcotics, by anemia, sudden change of posture, &c.—they are not, therefore,

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always or even generally premonitory of palsy or apoplexy; yet their pathology (a deranged condition of a portion of the peripheral brain belonging to some one or other of the organs of sense, or pertaining to the muscles of animal life, or involving both) may in every instance be somewhat analogous. Accompanying sensations or circumstances will, it is believed, enable the experienced and skillful practitioner to discriminate and affirm that they are or are not premonitory of disease.

*Pain in the head*—Especially if accompanied by vertigo, coming on in advanced life, and unattended with other affections commonly associated with it, is ever a portentous symptom, and demands the closest attention. It may be only an equivocal sign of cerebral affection, or it may be, as it is exceedingly apt to be at this time of life, the precedent of grave disease of its locality, whether within or without the cranium, or in a particular part or extending over the whole head with other symptoms, as nausea, constipation, sense of numbness, &c. &c. should be taken into consideration in order to settle the question whether it is premonitory or not. If premonitory, it is like the others removed by exercise, which should be gentle at first, and its effects, particularly in respect to its increase or continuance, be strictly watched.

*Difficult mastication, deglutition, &c.*—In hemiplegia, the action of the symmetrical muscles belonging to the face, tongue, fauces and glottis, is disturbed, and the parts with which they are connected, drawn to the well side; hence the difficulty of mastication, deglutition, articulation and respiration. In the performance of most of these functions, and particularly that of deglutition, if the attention of the patient be directed to the subject, he will soon discover that the difficulty is mainly on the affected side; because the muscles on that side, having lost the power of motion, and in some degree that of sensation, do not therefore resist the action of those on the well side. Consequently, when the attempt to swallow is made, the matter to be swallowed is

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forced over upon the disordered parts. Hence the assistance which is so generally derived from the application and pressure of the hand on the side of the face and neck, when the patient wishes to facilitate these operations. Deglutition, when premonitory of cerebral affection, of paralysis in particular, is often attended with a gurgling noise.

*Constipation and retention*, like those just mentioned, are symptoms which in paralysis arise from loss of sensation as well as from loss of motion. The primary sensation which naturally prompts the bladder and rectum to employ themselves, is experienced at the terminal outlets of these viscera, and of course belongs to animal life.* It produces the conviction that it is occasioned by something which the economy of the system requires to be removed, and also that these viscera are the organs by which its removal is to be effected; i. e. by the passage of their contents. But if this sensation be not experienced, they will make no effort for the removal of a cause, the existence of which, so to speak, they are not aware.† The rectum and bladder are organs of a complicated structure. Each has striated and non-striated muscular fibres and also nerves in its composition, which belong to both animal and organic life, and are therefore organs whose functions, like their structure, are of a mixed nature—partly animal, partly organic. In their normal state, they respond to two kinds of stimuli, the mechanical and chemical, which may act either conjointly or separately, each *per se*.‡ The susceptibility to these stimuli is modified by the condition of the organs at the time as it is healthy, irritable, insensible, or merely obtuse. Now, the cause which in this affection deprives the patient of the sen-

* I cannot call to mind a single case of paralysis of motion, with unimpaired sensation, in which there was incontinence of urine, or unconscious discharge of fæces.

† "The intestinal ganglia do not give out the nervous force necessary to the contractions of the intestines, except when they receive through their centripetal nerves the stimuli of substances in the intestinal canal."

‡ "The contents of the rectum and bladder acting as stimuli, produce a certain impression on the nerves of those viscera, which impression is conveyed through them to the adjacent ganglia of the sympathetic."

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sation to which we have alluded, also paralyzes the striated and in some degree the non-striated muscles, and constipation and retention, as necessary results, soon follow and continue for a time, when they are succeeded by involuntary discharges of urine and fæces. These phenomena, and the succession in which they occur, we explain in this way: The contents of the bladder and rectum, probably somewhat altered in their consistence and chemical properties, continue to accumulate, unconsciously to the patient, until the muscles, supplied with nerves from the ganglionic system, are put upon the stretch and stimulated to contract, expel the contents of these organs, without the control or even knowledge of the patient.*

These events, and the order in which they happen, are more remarkable in cases of paraplegia than in those of hemiplegia. In both, the retention, &c. are equally certain; but in the latter (paraplegia), the involuntary discharges usually take place sooner than in the former; and the explanation requires to be somewhat modified. In hemiplegia, the muscles controlling the outlets of the rectum and bladder are affected like the muscles of the face. Consequently, when these organs contract, analogous results ensue—the muscles of one side only are affected, while those of the other side are intact. The consequence is readily understood. The parts, as in paralysis of the face, are drawn to the well side, and the apertures are either opened, or afford no resistance whatever on the diseased side to the passage of the contents of the viscera, which come away unresisted and unheeded by the unfortunate patient.† Sometimes,

* "Ordinarily, the contents of the rectum and bladder, acting physically on the mucous membrane, or mechanically, i. e. by distention of their muscular coats, make an impression, which prompts them to contract and expel the contained matters."

† The inconvenience from these involuntary discharges may be in some measure obviated or lessened, by keeping the inferior extremities extended in a line with the trunk, and the nates drawn together by the application of long and broad strips of adhesive plaster, or by the uniting bandage skillfully applied. These mechanical appliances give the support which would be derived from the muscles were they intact.

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however, in hemiplegia these involuntary discharges are preceded by a complete obstruction, while in paraplegia the involuntary discharges generally commence almost immediately without being preceded by either retention or constipation. When retention of urine results from an injury of the spinal marrow, it is commonly removed by one or two introductions of the catheter; but incontinence soon intervenes. When the palsy is caused by a mineral poison, as lead, or by malaria, incontinence of urine and involuntary discharges from the rectum seldom if ever occur—a circumstance which should be taken into the account when making up a diagnosis in obscure cases.

It may be well to remember that only the fore mentioned, and nearly all the positive as well as premonitory symptoms of apoplexy and palsy, whether of sensation or motion, have their seat in the termini which constitute the peripheral brain; and that the premonitory symptoms of these formidable diseases—as sense of coldness, numbness, drowsiness, pricking, formication, and lastly, twitches, cramps and spasms—invariably occur first in these termini. The five first mentioned are sent by way of admonition, and the last three as preventives, and also as a solemn intimation that the real attack is near at hand. These involuntary movements are, moreover, the suggestions of nature as to what ought to be done; that the patient should without delay have recourse to exercise; that whenever any of these premonitions are present, he should exert the limb with energy, instead of rubbing or having it rubbed, as is usually done. He should be advised of his danger, and assured that the course suggested will not only put a stop to the unpleasant feelings, but prevent the accession of the disease of which they are the precursors and heralds.

This method was adopted and practiced by Kanski, when threatened, as he frequently was, by other attacks; which were always obviated, as we assured him they would be, by this expedient. We desire to speak of this method of treat-



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ment somewhat emphatically and positively, because we have, for a long and tolerably extensive practice, found it uniformly successful, when connected with other proper hygienic measures. But what has impressed us the more deeply in favor of its importance, is our own personal experience, having been at one time or another affected with all the premonitory symptoms—even the cramps and spasms—which were invariably and certainly removed by strenuous and persistent action. The cramps and spasms to which we have alluded sometimes terminate in epilepsy instead of apoplexy or palsy; in which case, the preventive remedy (exercise) is the same, and is equally efficacious and successful.*

These affections of the muscles, like convulsions, constitute the efforts of nature; the design of which, by driving blood to the muscles, is to relieve the brain or nervous centres from the imminent danger with which they are menaced. The principle is the same in disease as in health. In taking this view, we must not forget that the exercise of the muscles, both in health and disease, may be carried so far as to increase the circulation in both force and frequency, and so produce or aggravate the very evil which it was intended to prevent. Hence the necessity of caution. Depletion, abstemious diet, &c. may sometimes be with great propriety superadded.

* A medical gentleman, extensively engaged in the practice of his profession, but subject to frequent attacks of epilepsy, informed the writer that, conscious of the danger of having a fit when riding in his carriage or on horseback, he always sprang from the one or the other whenever he had the slightest intimation of the accession of a paroxysm, and sought a convenient place in which he could go through the struggle with safety, but that he had never been attacked when thus prepared for the assault—the demon never came! The explanation is, that the vigorous effort made to procure the place of safety, prevented the fit. This, I believe, will generally prevent the fit in cases in which the aura gives timely notice, and the patient has the resolution to put it in practice. When the fits are periodical, they should be anticipated by exercise—and particularly when they occur during sleep, towards morning, the patient should be aroused, and made to exercise.

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*Decline of Life.*

"As age steals on, all the functions are performed more languidly than in earlier life. The energies of the ganglial system decline, as evinced by the digestive, circulating and secreting functions which it actuates. The sensibility of the cerebro-spinal system, and its dependent organs; the acuteness of our intellectual powers, our moral emotions and affections; and the activity and strength of the locomotive organs—all experience diminution, great in proportion to the advances of age."—*Copland.*

The premonitory symptoms which have been mentioned, are not unfrequently signs of approaching age, as well as of disease, and are then almost as certainly and effectually met by gymnastic exercises, as they are when premonitory of disease. In connection with exercise, they are, in this point of view, worthy a more extended and thorough consideration than we can give them, except in illustration of our subject. With the symptoms and phenomena of approaching age all are familiar. We therefore beg leave to state that observation and experience have forced upon us the conviction that most of them may be obviated and prevented, to a certain extent, by persevering in a consistent course of gymnastic exercises. It will prevent the rigidity of the fibrous structures, also their ossification, and add to the muscles what is lost by the areolar tissues in the decline of life. By giving strength to the muscles, it prevents the slow, vacillating and embarrassed movements of the aged. By often contracting the dorsal muscles, which curve the body backward, stooping is resisted and prevented; and also likewise the consolidation and thinning of the fibro-cartilaginous substances, interposed between the bodies of the vertebræ, by which this proclivity of the body forward and downward is favored. Determining more blood to the brain and quickening its circulation, increases its nutrition, and consequently prevents the atrophy of this organ, which results from age, and also

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sustains its functional powers, both mental and physical. By throwing more blood upon the heart, it keeps up its volume, consistency, tone and action, and on the same principle, continues to invigorate the stomach and preserve the viscera in healthy and vigorous performance of function.

There is, in advanced age, very much the same indisposition to muscular effort as in paralysis, and is the more difficult to overcome when paralysis and age concur in the same individual. The aged, like the paralytic, instinctively loves to be quiet, and consulting his ease, foregoes exertion of body and mind. Remiss in attention to objects of sense, his organs lose their acuteness of perception, and languish and fade from inactivity. The eye grows dim, the ear heavy, the touch benumbed and the muscles shrink and stiffen, for want of exercise. When the joints become rigid and motion irksome or painful, especially in the morning, or indeed at any time of day, instead of giving up or yielding to the promptings of inclination, we should immediately commence upon a system of gymnastic exercises, and continue them for the time being, till the joints become supple and the muscles cease to complain. If this advice be taken and followed to the letter, the matutinal dose will probably suffice for the day. But, we add, whenever the contingencies mentioned recur, the remedy should be repeated, by which we are quite certain the ordinary infirmities of age may be obviated or postponed for years.

P. S.—The cases related in this paper were all, except the first, treated at the New York hospital, under the daily supervision and approbation of Drs. Griscom, J. M. Smith and Bulkley, who constituted the medical staff in attendance while these patients were under treatment. To these gentlemen, and also the governors, I am under special obligation for the liberality and efficiency with which they seconded my views and efforts. I am likewise much obliged to the gentlemen on the surgical side of the house, for sending to me several cases, in which it will be seen surgical practice

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was not a little interested. I have preferred, in this publication, cases treated in a public institution, to those which have occurred in my private practice, for the reason that the former were subjected, in the progress of cure, to the daily inspection and observation of the attachés, and many others who visited the hospital in the capacity of either practitioners or students. The first case having gained considerable notoriety by being exhibited to several of our public institutions, is not regarded as forming an exception.

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ART. II.—*Cholera Infantum.* By ROBERT A. GHOLSON, M. D. Petersburg, Va.

THE object of this paper is a brief investigation into the causes, nature and treatment of cholera infantum.

*Etiology.*—The opinion was at one time almost universal, and is now pretty general, that this disease is peculiar to the United States, and therefore has its origin in some specific cause peculiar to this country. What this cause is, however, has ever been confessedly doubtful, and given rise to great diversity of views among those who entertain such an opinion.

In the northern section of this country, where the disease is almost exclusively confined to cities, towns, &c. the opinion is general, that a close, confined or otherwise impure air must be combined with high atmospheric heat, to produce the disease. Eberle, Dewees, Hallowell, Condie, Wood, and northern authors generally, adopt this etiology. "Where it occurs in the country (says Condie), which is rarely the case, it is almost exclusively in low, damp, and otherwise unhealthy situations."

In the southern and western sections of this country, where the disease is more extensively prevalent—prevailing alike in country and town—this malaria theory is not so generally adopted. Its prevalence in the most elevated and

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salubrious regions of this and other states, is often so striking and fatal, that many of the most distinguished physicians of the south—among others Professor Mettauer of this state—regard high atmospheric heat alone as being the only essential cause of the disease. The most plausible and injurious of all the theories, however, which connect this disease with some peculiarity of our climate, is that advanced by John Bell of Philadelphia, in Bell & Stokes' Practice. Perceiving that the frequency and fatality of the disease bore no constant and fixed relation to the heat of our climate—that these did not increase as we advance south—that on the contrary, the disease is perhaps more common in Boston than Charleston—in Philadelphia than in Orleans—he ascribes it more to those extremes of temperature in our winters and summers, so characteristic of our climate, especially in the northern section of this country, than to high atmospheric heat. But all these various views, predicated more or less upon the assumption that cholera infantum is peculiar to this country, have lost much of their interest since the recognition of the fact, that the disease *is not confined to this country*, but has always prevailed more or less in Europe. There is now scarcely a European author, who, under some name or other, does not describe, and that very well and accurately, this disease—both the symptoms during life and the appearances after death. West, Copland, Cheyne, &c. of England—Billard, Berrier, Gendrin, Rilliet and Barthez of France—to say nothing of the German authors, who are probably still more familiar with the disease—portray an affection of the stomach and bowels in no respect essentially different from our cholera infantum. Some of the most distinguished physicians too of this country, who have ample experience in the diseases of both Europe and America—as Professor Dunglison among others—assure us that this disease is often prevalent in European cities. In this country too, we sometimes observe the disease in spring, fall, and even winter.

If the above facts are admitted—if it be incontestable

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that cholera infantum occurs in the more equable and temperate climate of Europe, as well as in this country—that here we observe it in all portions of this country—in the country as well as our cities and towns—in the upper and more salubrious, as well as in the lower and more unhealthy latitudes—at all times and seasons—in spring, fall, and even winter, as well as summer—then it is clear that the above hypotheses of its etiology must be inadequate to explain all the facts of its history, and must therefore be rejected as unsatisfactory. Surely a disease, which seems to be thus capable of being developed in almost all climates, seasons and localities—liable to occur in London and Paris as well as Philadelphia and Charleston—in the most salubrious rural districts of England or Virginia, as well as the confined and filthy lanes and alleys of London or New York—in winter as well as summer, at least in this country—surely such a disease cannot be dependent for its *occurrence, its existence,* upon atmospheric heat, atmospheric vitiation, or any other atmospheric influence, however much these various conditions of the atmosphere may confessedly affect its prevalence and fatality.

In order to explain the extensive prevalence of cholera infantum, its occurrence under such a diversity of circumstances, in regard to climate, country and locality, we must turn our attention to those internal causes, or rather physiological changes, which, far more than any external influences, seem to be concerned in its production. At that period of life, the period, to wit: of primary dentition, to which this disease is almost exclusively confined, the physiological development of the digestive organs, in order to prepare for the change in the food of the organism, which the now rapidly developing process of dentition admonishes to be near at hand, is so rapid as to amount almost to a pathological condition. This rapid nutrition and growth seem to be directed especially to the glandular or follicular apparatus, which we know is the principal seat of this disease. The morbidly excitable condition of these follicles, and in-

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deed the digestive mucous membrane, generally, is so striking at this period, that taking an a priori view alone, we should naturally expect choleric affections to be frequent at this period, and that those causes, which are capable of producing them at other periods of life, would, a fortiori, produce them now.

Now, when we come to reflect, that at no other period of life are these causes so prolific and potential, both within and without the organism—that this is the period when the irritation of teething is ever and anon lashing into morbid excitement the whole nervous mass, and all its dependencies—that at no other period is the human system more under the influence of fright and other sudden mental emotions—that at no other period is it so sensitive to atmospheric changes—that this too is that perilous period, when the bland and congenial breast-milk is suddenly exchanged for often the most crude and indigestible articles of diet—I say, when we come to reflect, that at this very period of physiological predisposition—of natural proneness to the disease—many of these causes, which are most calculated to produce it, are omnipresent, and most prolific and potential both within and without, we can hardly be surprised at the extensive prevalence of the disease, and that it should sometimes occur when there was no very notable atmospheric heat or atmospheric vitiation. Where this predisposition, the result of mere physiological changes, is united with that *constitutional predisposition* which many children exhibit to this as to many other diseases, there would seem to be often such an irrepressible tendency to its spontaneous development, as to make it independent of those causes which ordinarily excite it into action. This is particularly the case where this predisposition is hereditary. A lady of my acquaintance suffered, while an infant, from a grave and protracted attack of cholera infantum in one of the tide water counties of this state. At the age of womanhood, with a constitution yet impaired from early bad health, she married a gentleman from one of the upper counties, and

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changed her residence. The effect upon her health was magical, and she soon became the mother of several promising children. But though their residence was in the country—in a high and salubrious locality—and though their infancy was guarded and shielded by the most enlightened hygiene, they became successively the subjects of cholera infantum, which, as in their mother's case, ran a long and protracted career.

But while cholera infantum is thus capable of being developed by a variety of causes, independent perhaps of any condition of the atmosphere, there can be no question that to this great prolific cause of disease—to the atmosphere in its various thermometrical, hygrometrical, barometrical, electrical and other inappreciable conditions—must its prevalence and fatality be chiefly ascribed. We may go farther, and say with perfect safety, that in the absence of an unusual degree of atmospheric heat, no other condition of the atmosphere, and indeed no other cause, seems to be capable of producing this disease, except in its mildest manifestations, and that its prevalence and fatality may be said absolutely to depend, "ceteris paribus," upon the degree of atmospheric heat. That high atmospheric heat, however, when associated with various atmospheric vitiations, more especially with those atmospheric poisons which seem to be chiefly concerned in the production of idiopathic fevers, should be capable of producing this disease in its most malignant types, is as consistent with reason as it is in accordance with facts. Hence its striking fatality in our large cities and in those sections of our country very subject to idiopathic fevers, either continued or periodic.

I shall now proceed to give only such a brief sketch of the symptoms of this disease during life, and the appearances after death, as may serve to elucidate its nature and treatment.

*Symptoms, course of the disease, &c.*—Cholera infantum usually commences with diarrhœa, resulting, sooner or later, in violent vomiting and purging, attended with more or less



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febrile movement of the system—the vomiting, however, usually ceasing or moderating in a few days, while the purging persists, presenting, at different periods, great diversity in the color, consistency and nature of the discharges; being usually light, thin, watery and profuse at first; then greenish or yellowish—and finally, when the disease progresses towards a fatal termination, more or less mucous or bloody, attended with tormina, tenesmus, a swollen and tender abdomen, and great emaciation and prostration. But little or no fever and constitutional disturbance attend the progress of the disease, unless it runs, as stated above, into entero-colitis, or inflammation of some other organ—as the brain, &c.—when we have continued symptomatic fever along with the characteristic symptoms of the local inflammation. The tongue, in the early stages, is covered with a light mucous coat—but in the latter stages attended with entero-colitis, becomes red and fiery, and often along with the mouth and gums, presents an aphthous appearance. The skin is generally dry, harsh and pale, and sometimes in the latter stages, covered with sudamina and petechiæ. There is more or less inequality of temperature from the commencement, which becomes very great as the disease progresses towards a fatal termination. The urinary secretion, like that from the skin and liver, is generally deficient and high colored. Such is the ordinary mode of invasion and progress of the disease. But when teething plays a predominant part in the production of the attack, we will have a greater predominance of nervous symptoms, while the stomach and bowels may be comparatively quiet—such as great restlessness and irritability, impotence of light, sudden stools and screams from any noise—these symptoms attended often with inflamed and swollen gums, flushed face, hot head, &c.

Again—The onset of the disease may be sudden and overwhelming. A child will go to bed apparently well. Its mother will be awakened in the night by its cries, and vomiting, and when a light is made, will find it drenched in those profuse watery discharges, which have been poured out from

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its stomach and bowels. These discharges continue irrepressible, and when morning dawns, she can scarce recognize, in the pale and haggard aspect, the shrunken and collapsed features of the dying infant the rosy-cheeked, bright-eyed babe, she had ere now hushed to sleep with so much seeming promise of health.

But there is still another type of this disease which, from its frequent occurrence and great fatality in the southern and western sections of this country, demands a careful consideration. It is that type which results from the disease being complicated with the prevailing fever of the country in which it occurs. In the upper latitudes of this and other states it will be attended and modified by some form of continued fever, here, in lower Virginia, and other low and miasmatic localities, by some form of periodic fever. This febrile type of the disease often runs, especially in this climate, a rapid and fatal career, and seems to prevail often in an epidemic manner, presenting, in the infant, the analogue of that terrible disease in the adult, "epidemic malignant dysentery." How many little negroes upon the large plantations of the south are annually swept off by this fatal scourge! This type of the disease is ushered in, along with the vomiting and purging, by a grade of fever and a predominance of nervous symptoms, which no existing local affection can possibly explain.

In this region of Virginia, the fever, unless upon its first invasion, it lights up inflammation either in the cerebral or digestive and abdominal organs, will either intermit or remit, or show a strong tendency to do so, in the course of twenty-four hours, while the stomach and bowels will become comparatively quiet, and the child will emerge from its state of stupor and again take nourishment. In a few hours, however, its feet will become cold; its head hot; its stomach irritable. These symptoms, soon followed by another hot and burning fever, in which the child will fall promptly into stupor, from which it will be aroused only by those paroxysms of tormina and tenesmus, which usually

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accompany the greenish and more or less mucous and often bloody discharges from the bowels. So far as my own observation extends, I have never known cholera infantum to prevail extensively and fatally in the country, without presenting this type.

*Anatomical characters.*—The investigations of pathological anatomy have very conclusively established the fact, that cholera infantum consists especially of a morbid affection of the follicular apparatus of the stomach and bowels. Dr. William E. Horner of Philadelphia was perhaps the first American observer, who called the attention of the profession to the follicular lesion in this disease, and showed that it was probably the same as had been so constantly observed in a similar affection of children, described by European authors. More recent investigations and a close comparison of the American cholera infantum, with the European affection, portrayed by different authors, under various names—as that of "choleric fever" by Copland; "atrophia ablactatorum" by Cheyne; "infantile diarrhœa," by West; follicular enteritis," by Billard; "follicular diacrisis," by Berrier, &c. have demonstrated the correctness of Dr. Horner's views, and exposed the fallacy of the opinion that this disease is peculiar to the United States.

For a minute account of its anatomical characters, the reader is referred to the above European authors, and American authors generally, but especially to the paper of Dr. E. Hallowell, in the July No. of the American Journal of Medical Sciences, on "edemic gastro follicular enteritis."

Without going into detail, it will be sufficient here to observe, that when death takes place in the early stage of the disease, the only morbid appearance which is *constant*, is a preternatural development of the solitary and agminated glands—principally of the former. The enlargement of these glands seems to be unaccompanied by any appearance of hyperemia, or inflammation, resembling, says Dr. Horner, "small grains of white sand sprinkled over the mucous membrane, and about the size of a millet seed." When death,

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however, takes place at a later stage of the disease, we have generally presented the evidences of inflammation and its products on these glands and the intervening mucous membrane; the glands being found more or less ulcerated, and the membrane inflamed, often thickened or softened, and covered with tenacious mucus. Other organs, too, give evidence occasionally of congestion or inflammation. The liver is sometimes enlarged, the brain and its membranes injected, and the former softened and disorganized, or effusions found beneath its membranes and in its ventricles. The follicular disease, either simple enlargement or ulceration, seems to be invariably greatest in the large intestine—not so great in the small, and scarcely noticeable in the stomach. Inflammation too of the mucous membrane observes a corresponding increase as we descend from the stomach to the anus. Softening is observed most constantly and extensively in the stomach and large intestine, though frequently found also in the small intestine.

*Nature of the disease.*—The hepatic pathology was at one time applied to this as indeed to almost every other disease in the southern country. The absence, however, of any constant lesions of the liver, prove very conclusively that those functional disturbances in this organ which we frequently observe in this disease, are generally sympathetic of the gastro-intestinal disease, and play a secondary and subordinate part in its morbid phenomena. The only essential pathological element in this disease is clearly and confessedly the follicular affection; and the only question at the present day, connected with its pathology, is as to the *nature* of this follicular disease. Is the enlargement of the follicles, which is the only *constant* lesion we observe, essentially connected with the process of inflammation? its first stage, that of vascular hyperemia or engorgement? or is it a mere disease in the nutrition and secretion of these follicles, not necessarily connected with inflammation? The profession is very much divided on this point. Some of the ablest French physicians—among others, Berrier and Gen-

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drin—deny its inflammatory nature, and regard it only as a diseased secretion—a morbid *dea-crisis* of the follicles.

In a practical point of view, it is only important to bear in mind, that while in the early period of the disease there are usually none of the evidences of inflammation, evinced either by the symptoms during life, or the appearances after death, the farther progress of the disease is very apt to be attended by very unequivocal manifestations of inflammation in some portion of the digestive mucous membrane and its appendages, especially in the large intestine, and that the traces of such inflammation are very constantly observed, where death follows in such cases.

*Treatment.*—It is evident, if the above views of the etiology and pathology of this disease be correct, its treatment must vary with its causes, types and stages. We should endeavor to ascertain those causes which have played a predominant part in bringing on the disease, and prevent their farther operation as far as practicable. Hence, if the child has been confined to a close and confined atmosphere, from a residence in a town or city, it should be given the benefit of as much fresh air as possible, and even removed to the country if practicable. When the disease occurs in the country, and it seems to be connected with any local atmospheric impurity, the child should be removed to some other locality. If high atmospheric heat has contributed principally to the disease, and its continued prostrating effects present the greatest obstacle to recovery, an immediate change to a more temperate climate should be advised. When teething has played a predominant part in the causation of the disease, the gums should be watched and freely lanced when they become swollen and red from the advancing teeth, and the irritability of the system quieted as much as possible by fresh air, the tepid bath, &c. The diet of the child will demand the most careful attention. If it has not been weaned, healthy breast milk should constitute its principal diet, though in many cases attended with much excitement and evidences of inflammation. This may be too

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heavy and indigestible, and will have to be allowed very cautiously, and substituted by mucilaginous drinks. When the child has been weaned very recently, it had better be restored at once to the breast, if possible. When this cannot be done, we must be content with substituting a pure article of cow's milk, more or less diluted, or mixed with other articles, as gelatine, arrow root, moss, &c. as may suit the taste, age, habits, &c. of the child. The clothing, and bedding of the child too should not be neglected. A light flannel shirt should always be worn next to the skin, and when the weather is hot, but little more than the lightest dress over this should be worn. The child should never be permitted to lie on feathers, especially a feather pillow, and its covering at night should correspond entirely with the state of the weather.

With these hurried remarks on the hygienic, let us now proceed to the therapeutic treatment of the disease.

[To be continued.]

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ART. III.—*Epilepsy caused by Amenorrhœa.* Reported by J. WOODVILLE ASHBY, M. D. of Fauquier county, Virginia.

EPILEPSY being a disease that remedies so often fail to relieve, I have thought that the following case might not fail to be of interest, and have therefore concluded to lay it before the profession, without pretending to discuss the subject, or make any comments upon the case, which, to relate in as few words as possible, is about as follows:

Mary, servant girl, æt. 25, mother of one child (which is now nearly five years old), had been the subject of epilepsy for nearly three years, during which period she was under treatment of Dr. Cooper of this county. Her general health had become very much impaired. When the disease first made its appearance, she would have an attack every month,

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but more recently they had been occurring every two weeks, preceded by headache for a short time. The fits would then come on of a pure epileptical character.

I learned that she had enjoyed remarkable good health up to about three years previous to the time I saw her, when from some cause her menses was suspended, and soon after she became the subject of epilepsy, which had continued unremittingly up to the time I saw her.

Presuming the disease was dependent upon some lesion about the womb, I made an examination per vaginam, but could discover no diseased action there; but believing the amenorrhœa was the cause of the epilepsy, and probably the amenorrhœa caused by some spasm of the womb, I prescribed Dover's powder and camphor—10 grs. of former and 3 grs. of the latter—three times a day. On the third day the menses came down and she has not had but one attack since then, when her feet got wet, her menses was suppressed, and she had a fit. She being anemic, I gave the citrate of iron. Her general health improved rapidly, and she is now enjoying good health. It has now been many months since she has taken any medicine, and has no return of the disease.

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ART. IV.—*Bellevue Hospital Reports.* By T. POLLARD, M. D. (Continued from April No.)

*Delirium Tremens treated by Chloroform.*

MR. ****—Admitted February 8, æt. 25.—Been laboring under delirium tremens for several days, following a long period of *spreeing*. Bowels confined; tongue white and coated; disposition for drink strong; anorexia; delirium not very violent, but very decided. ℞ Submur. hyd. ʒss, opium, grs. v, in three pills, one of which to be taken every two hours; wineglassful brandy every six hours.

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February 9.—Did not sleep last night. ℞ Citrate of magnesia, tumblerful every two hours until purged, and then opium, 4 grs. and then 2 grs. every 2 hours afterwards until sleep. If does not sleep after taking 12 grs. of opium, administer chloroform by inhalation.

February 10.—The 12 grs. of opium had no effect in producing sleep; patient was then put under the influence of chloroform; easy to get under its effects, and he then slept quietly almost all night. Cit. magnesia operated before the opium was commenced. ℞ Opium, 3 grs. every two hours, to 12 grs. and then, if sleep is not procured, administer chloroform.

February 11.—Did not sleep until chloroform was given; then slept quietly, and is more rational to-day.

February 12.—℞ Submur. hyd. grs. v, every 4 hours until it acts; then chloroform without any opium.

February 13.—Purgative acted once or twice; chloroform was then administered; much more difficult to get under its influence than when opium had been previously given; he slept, but not nearly so well as when the opium had been used in conjunction with chloroform; improving; leave off brandy.

February 14.—℞ Citrate of magnesia until purgation; then opium to the amount of 10 grs. (4 grs. and then 2 grs. every 2 hours), and then chloroform.

February 15.—Slept well after chloroform was inhaled, and to-day is almost entirely well.

From this time patient continued to improve, under the use of a tonic, and occasionally a purgative. Opium and chloroform discontinued.

The beneficial effects of chloroform was very marked in this case. Opium seemed to have no narcotic or quieting effect until the chloroform was administered.

On the 12th he took chloroform at night, without having previously used opium. It is to be remarked that it was very difficult to get the patient under its influence, and when its effect was produced, it was nothing like so good



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and tranquilizing or lasting. And from this it is manifest that the remedies act well together, a less quantity of each being required, and the result being much more satisfactory.

Tom—(continued from previous No.)

March 24.—It will be recollected the os calcis was removed on the 10th inst. Much pain has existed about the foot since the operation. On introducing probe to-day the astragalus was found denuded of periosteum; much discharge of pus from the foot, and the constitution suffering a good deal.

March 27.—On consultation to-day, things not improving, it was determined to amputate the leg. This was accordingly done below the knee, under the influence of chloroform. On account of previous suffering and debility, the patient stood the administration of chloroform and the operation badly. Under the use of stimulants and opium, however, the system gradually regained its tone, and rallied.

April 21.—Patient doing well, and there is every prospect of speedy recovery. In fact, the healing of the stump is nearly completed. On examination of the limb after amputation, infiltration of pus was found to have occurred more than half way up the limb. The ends of the tibia and fibula were in a curious condition, as were the upper faces of the astragalus, where these bones articulate. This was to every appearance an old disease. The formation of pus, extending up between the tibia and fibula, was of recent origin, the result of the previous operation.

Jeffrey, æt. 50. Admitted Jan. 25. Chronic catarrh of the bladder, with slight enlargement of the prostate; has been in bad health for some time; has been suffering with hemorrhages from the urethra or bladder, and has had much irritability of the latter organ; urine, which is voided very frequently, contains a great deal of muco-pus; emaciation, and appearance of much constitutional disturbance. He was treated in the beginning with balsam copaib., fluid ex-

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tract of buchu, ol. terebinthinæ, and tinct. opii, combined; then with mur. tinct. ferri; and pareira brava was afterwards substituted for buchu; blisters were used over the bladder, and to the sacrum. The iron was discontinued, because it produced irritation about the bladder, and increase of hemorrhage. It was tried twice, with the same effect.

February 26.—All other treatment having proved unavailing, and no perceptible improvement occurring, it was determined to inject the following into the bladder: ℞ Nit. argent, gr. i; aq. distillat. ℥iv. The bladder was previously washed out with warm water. The injection was done through a gum elastic catheter, with a large sized glass male syringe.

February 28.—The improvement which followed the injection of the nitrate of silver was most marked. The irritability of the bladder commenced subsiding; the muco-pus diminished, and the general condition was more comfortable.

March 1.—Inject the bladder with nit. argent, ½ gr. to the oz.; well borne.

March 4.—Inject 1 gr. to the oz.; bladder improving, and the discharge from its coat diminishing very much.

March 18.—Injections every 3d day, of the same strength of the nitrate of silver; improvement in every respect rapid; to-day the strength was increased to 1½ grs. to the oz.

April 8.—Injections continued of the same strength every 3 or 4 days; improvement continues. Ordered the injections to be discontinued for a while.

April 15.—More mucus from the bladder; more sign of disturbance in the general constitution. Ordered injections to be resumed, of the strength of 1 gr. to the oz.

April 21.—Improvement since the last injections. Patient looks almost well, and says he feels as well as he ever did, except some irritability of the bladder, which causes him to rise three or four times during the night, and causes during the day more frequent urination than natural. At one time, before the use of the nit. argent, he had almost constant dribbling from the penis, which produced excoriation and

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phymosis. Now he is entirely rid of this. After the irritability of the bladder was allayed by the injections, the mur. tinct. ferri was resumed, and borne very well, and with very good effect in improving the general health.

Amanda—Admitted December 27, 1857, æt. 18. When admitted, on stripping the chest, the *left* side appeared bulging and enlarged; the other side contracted; cough and night sweats. Respiration in the *right* lung very feeble; in the *left*, puerile. Much emaciation, with feeble pulse; appetite good. Diagnosis—that pleuro-pneumonia had existed in the right side; that extensive adhesions existed on this side, binding the pleura to the lung; that the action of the respiratory muscles was very imperfect on this side; that some chronic inflammation still existed in the parts, keeping up the cough and producing hectic fever. The bulging on the left side was more comparative than positive, though there was probably some natural deformity, the right shoulder being lower than the left.

The treatment in this case was directed to building up the constitution, and enabling it to throw off the disease. A cough mixture of syr. prun. virginiana and morph. was ordered, and cod liver oil and cinchona directed to be taken three times a day. Good diet.

In a day or two afterwards, in addition to this, 1 pt. of porter a day was directed.

Feb. 5.—Dismissed, almost entirely well; cough gone; general health and strength in very good condition; respiration in the right lung much improved, though not as strong and as free as in health.

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# SELECTIONS.

I. *Remarks on that Form of Moral Insanity called Dipsomania, and the Legality of its Treatment by Isolation.* By DAVID SKAE, M. D., F. R. C. S., Physician to the Royal Edinburgh Asylum for the Insane.* (Read at the Medico-Chirurgical Society, January 20, 1858.)

A MAN is a drunkard who gets drunk at the festive board—who seeks occasions for getting conveniently drunk without interfering with his ordinary occupations—who takes a few days' drinking at a time, when he has plenty of money, and returns to his duties and employment when he has finished his superfluous cash and his "ramble," or "spree," as it is called among the humbler classes in Scotland. Some men, on the other hand, get systematically and regularly drunk every day after dinner, some every night before going to bed, and will perform their daily duties with propriety and efficiency. There is a large class who drink continuously, and consume large quantities of stimulants, and seem to have a constant craving for them, which they satisfy by constant potations; yet they do not come under the denomination of insane drinkers; they exercise a certain amount of self-control, a sufficient amount of restraint upon their appetites not to allow the quantity which they drink to affect their aptitude for business or driving a good bargain. These are the decorous drunkards of society, and some of them are perhaps the hardest drinkers of any.

The effects of intoxicating drinks vary very much, as is well known, in different individuals, according to the temperament or some peculiarity in the constitution. Some men get hilarious and others stupid; some become amorous and others maudlin in their cups; and some, again, become pugnacious, and even dangerous. It has been often observed, that men who have suffered from severe blows or injuries of the head become very violent, and even maniacal, when intoxicated. Such persons as these frequently come under the notice of the legal authorities, for acts of violence committed while intoxicated. But, in these cases, if the individual has

[* The propriety of any attempt to treat obstinate drunkenness by forcible confinement, is a question of great and increasing importance to the profession and to the public. We have, therefore, made large extracts from the able article published by Dr. Skae, in a late number of the Edinburgh Medical Journal.—*Ed.*]

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voluntarily become intoxicated, knowing that in that state he is liable to be dangerous, he is justly held amenable to punishment for acts of violence committed when drunk. The responsibility of a person of this kind for any of the consequences of his getting drunk, knowing what may ensue, has been compared to that of a person firing a gun out of a window into a crowded street, who would unquestionably be punished for the effects which resulted from his folly. It would be a tedious task to describe all the different effects and kinds of drunkenness. It may suffice to say, that in all cases of mere drunkenness, the characteristic feature, as distinguishing them from insane drinking, is the preservation of the power of self-control. In the mere drunkard, there is a method in his madness; it is a systematised or regulated, or at least a voluntary habit. A morbid craving may be, and is generated, after drunkenness becomes a habit; but it is regulated, as to the time, and mode, and extent, and frequency of gratifying it, by certain considerations—such as a regard to outward decency, to the duties of life, or to the calls of business. And it continues to be so regulated, perhaps by a very low standard, and by one which is gradually made lower and lower; but still the habit is regulated and controlled as long as the person is merely a drunkard, and until the habit degenerates into a disease.

The principal, the diagnostic feature of this disease—that of insane drinking, dipsomania, or oinomania—is, on the other hand, the absence or loss of the power of self-control or self-regulation. Persons affected with this form of moral insanity do not drink from the pleasure which the social board affords, but, on the contrary, will not unfrequently preserve a certain amount of decorum while in company. Neither do they drink for the pleasure which the wine gives them; they will drink any kind of intoxicating stuff. Nor do they drink at a convenient time and place, and only occasionally; they drink as often as they can, and whenever they can, and as much as they can; their craving for stimulants is incessant and incontrollable; no considerations of self-respect, no regard to public opinion, or common decency, or domestic ties, or religion, or the certainty of impending ruin, degradation, or even the fear of death, can prevent their drinking till they can drink no longer. Such persons will often deplore their fatality, their inability to control their desires, and will say, with tears in their eyes, as some have done, that if hell were yawning at one side of them, and a bottle of brandy standing at the other, they would drink, although the next moment they were to be thrown into the

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bottomless abyss. In fine, such persons drink because they cannot help it; and if they really cannot help it, they must be regarded as no longer responsible agents—as therefore insane, and proper objects for being restrained and protected against themselves.

The loss of self-control is, indeed, the most essential condition of almost all cases of insanity. The most constant symptoms of insanity are those referable to altered affections, perverted desires, and morbid propensities. Delusions, so much dwelt upon by some writers, particularly among legal authorities, as essential to insanity, are but its accidental concomitants, like hallucinations of the senses. Every form of madness, from acute mania down to dementia, may be met with where there are no delusions. In mania there may be a morbid exaltation of all the emotions and passions, over which self-control is entirely lost, and the individual riots in unrestrained laughter, singing, anger, destructiveness, and violence. The loss of control may extend to the thoughts and ideas, which succeed each other with extraordinary rapidity, and give rise to incessant talking and incoherence. In partial insanity, one particular emotion or desire may be morbidly excited, and we may find a deep melancholy and depression without any delusion—a hopeless but abstract gloom, leading, by the total overthrow of the power of self-control, to an act of suicide. There may be, as has been fully established by numerous well authenticated cases, a morbid impulse to destroy life, without any delusion; an impulse over which the affected person loses all control, and under which he commits some homicidal act. The morbid excitement of the sexual appetite only becomes insanity when the person loses self-control, and the victim of satyriasis or nymphomania outrages all considerations not alone of morality, but of ordinary decency and the common instincts of humanity.

It is, in fact, the loss of control over morbidly excited passions, whether of an exalted or depressing kind, that constitutes insanity, and distinguishes it from ordinary excitement or depression. So it is with insane drinking; it is the loss of control over the morbid appetite that distinguishes it from ordinary drunkenness, and constitutes it a form of moral insanity.

I prefer the term moral insanity, in describing this disease, to the terms oinomania or dipsomania, for three reasons: First, because neither of these names conveys a correct idea of the disease, which is not an insane thirst, nor a thirst for

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wine only, but may consist in a morbid craving for stimulants or narcotics of any kind; second, because it is under the denomination of moral insanity that this disease is recognized by the commissioners in lunacy for England; and thirdly, for the most important reason of any, namely, that the craving for stimulants is generally only one of many symptoms of moral perversion which characterize the disease, and which it is of great importance to recognize, as they render the duties of the medical attendant comparatively easy, when they are met with in any particular case.

Of these other symptoms of moral perversion, the most common is the habit of lying. In almost all cases of this variety of moral insanity, there is a total disregard for truth. Such persons are singularly mendacious. They will resort to every possible device to procure stimulants, to excuse their conduct, to deceive their friends and medical attendant, and will display an ingenuity and fertility in deceit which is truly marvelous. They will become faint, or be in agony with toothache, or tic, or cramp in the stomach, or colic, or dysmenorrhœa, or they will take diarrhœa or hæmorrhage, and be on the verge of dissolution, unless brandy, wine, or opium is administered. They will pawn every available article of dress, or furniture, or jewellery. They will borrow from servants or cabmen. They will get whisky smuggled home with their clothes from the tailor or the laundress. They will evade the most vigilant surveillance, and tell the most deliberate falsehoods in their attempts to deceive, solemnly appealing to God for their truth. When shut off from the ordinary sources of stimulation, they will sometimes resort to almost any thing in order to relieve their craving. I have known a young and delicate lady, after being prevented getting wine or spirits, and deprived of red lavender, lavender water, and eau de cologne, take creosote, vinegar, vitriol, and tobacco.

Allied to this disregard of truth is the total denial, often insisted upon by such persons, of their habit of over indulgence. They will very frequently disavow most solemnly having ever exceeded the bounds of strict temperance in their use of stimulants; and, if admitting at all that they ever have been the worse of drink, they will blame some other person or circumstance as the cause of it. The wife will blame the husband; the husband, the accident of meeting on one particular occasion some one, or being engaged in some circumstances which rendered it unavoidable. And, in this way, one or two undeniable overt acts of intempe-

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rance are conceded, when it cannot be avoided, while the habit or the loss of self-control is generally indignantly denied, except at moments of remorse.

Accompanying this disregard of truth, there are often other indications of moral perversion in the insane drunkard, such as extreme licentiousness, or a propensity to theft, or a delight in fomenting quarrels and creating mischief by leading other parties into trouble.

Again, this disease is very frequently met with in persons presenting certain mental peculiarities which are natural to them, that is, congenital. It is by no means uncommon to find it develop itself in youth, who have always been regarded as having a want about them, to use a vernacular phrase. They have never made progress in their education like others of their age—have never, perhaps, been able to learn to spell, and so forth; and, although illiterate and ignorant when they come to manhood, are often very vain, and at the same time credulous and silly. Or, again, they have been characterized, even from childhood, by certain perversities of disposition, such as a delight in cruelty to animals, disregard of personal appearance, love of solitary and gratuitous destructiveness, extreme obstinacy and selfishness, or a violent and mutinous temper upon slight occasion.

Lastly, the disease is very frequently hereditary; and it will be found, on enquiry, that a grand father, or father, or mother, or one or more brothers, have died of delirium tremens, or have otherwise shown the fatal propensity. The constancy with which the hereditary predisposition to this disease is transmitted, is most remarkable, and, in a vast majority of cases, can be traced either through the maternal or paternal side of the family.

To illustrate the truth of these remarks, I have analyzed the record of 86 of the cases of this form of moral insanity which I have had under my care, of which 20 were females and 66 males. I find, as the result of these comparisons, that of the 20 females one-half presented natural peculiarities in their mental constitution, being either of weak minds, of very violent and incontrollable passions, or subject to hysterical attacks of great violence, combined in some instances with great moral depravity.

Of the males, 30, or nearly one-half, were naturally of weak mind, or presented some mental peculiarity, such as silly vanity, general depravity of disposition, and, in some cases, considerable talent, but combined with eccentricity or some marked peculiarity. In both sexes, the disregard of truth was a common feature in most cases.



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In regard to hereditary predisposition, it is difficult generally to trace this in a public hospital, partly because many cases come in without any information regarding them at all, and partly because the friends, when they have friends, are generally very solicitous to deny or conceal the existence of a hereditary taint in the family, and will not unfrequently positively deny that any other member of the family is insane, while, perhaps, at the time there may be a mother in one asylum and a sister in another. Notwithstanding these difficulties, I find the hereditary predisposition distinctly traced in 32 cases out of the 86.

Of the females, this hereditary taint was found to exist in 10 out of 20. One had a brother insane; one a mother half witted; one had two cousins who died of intemperance; another had a father and mother who were both intemperate; another had a father, and another a father and brother, who were hard drinkers; three had mothers who died from the effects of intemperance; one had two sisters, both prostitutes and drunkards, one of whom committed suicide; and another had a brother, father and mother, all intemperate, and the latter of whom committed suicide.

Of the males, two had brothers affected with the same disease in the asylum, and three brothers who had the same disease, but were not sent to any asylum; one had repeatedly attempted suicide, and inherited, with his whole family, a loathing of life, which at times affected all the members of his family. Four had brothers who suffered from other forms of insanity; two had each two brothers insane; three had insane sisters; two had drunken fathers; one a drunken father and brother, and one a father and grandmother, drunkards; and of several others it was admitted that insanity was in the family, although the relationship of the members affected was not ascertained.

Before discussing the question of treatment, and isolation in an asylum or special establishment, it is necessary to complete this sketch by enumerating briefly the varieties of this form of moral insanity, and the causes which induce the disease.

Its varieties group themselves naturally into three divisions—the acute, the periodic, and the chronic forms of the malady.

Under the head of acute, I would include all those cases of incontrollable drinking which occur to persons of previously temperate or regular habits, but in whom this insane craving has been generated under the influence of some accidental cause—such as the novelty and excitement of a new

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sphere of duty, and the temptations of new associates and habits, all combining to lead to intemperance; or the depressing effects of some overwhelming calamity, or of some debilitating accident, or disease, or other agency, such as excessive hæmorrhage, protracted nursing, fever, and such like. It is well known that the use of stimulants, begun and indulged in under any of these circumstances, has gradually merged, in many instances, into an inordinate and incontrollable craving, and an insatiable and destructive use of them.

Cases of this kind are, however, if taken in time and treated judiciously and firmly, generally curable without recourse to any step for depriving the patient of his personal freedom.

Periodic or recurrent attacks of the disease are generally dependent upon some constitutional or hereditary peculiarity. Sometimes they occur at the critical age in females, and preserve a periodic form coinciding with the menstrual period. Sometimes they arise from injuries of the head. In many cases the cause is obscure.

Cases of this kind are less amenable to treatment than the former, particularly where there is a hereditary predisposition. They hardly justify confinement, however, or isolation from society. Where this has been tried, it has generally been found that the incontrollable impulse comes back at its accustomed period, when the imposed restraint has been removed. Nor does this form of the disease interfere materially, in many cases, with the duties of life. Many individuals have distinguished themselves in literature, or in professional or mercantile life, who have been known for a long term of years to retire periodically into the privacy of their own chamber, and, after indulging this morbid appetite to satiety for a week or two in their voluntary seclusion, to reappear again on the stage of life, and pursue their usual avocations with credit and success. Such cases are perhaps rare, and more frequently it happens that the recurrent or periodic form gradually degenerates into the chronic variety of the disease, the intervals becoming shorter and the attacks longer, until the intervals cease altogether, and a chronic disease or a fatal issue ensues.

It is the chronic form of this disease which is the least curable and most troublesome to manage. Here the craving for stimulants, brought on perhaps by indulgence and irregular habits, operating upon a constitution hereditarily predisposed, becomes constant, insatiable and incontrollable; and the daily or hourly indulgence suffers only now and then

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a temporary check by illness induced by it, by attacks of delirium tremens, or outbursts of mania.

I believe it is agreed by all parties, that this form of the disease can only be treated effectually by prolonged and complete abstinence from all stimulants. This has been attempted in two ways: First, by boarding the patient in some house where, in consequence of its remoteness from places where ardent spirits or other stimulants can be procured, or where, by the stringent rules of the house, and the watchfulness of those connected with it, a barrier may be placed against attempts to gratify the morbid craving. Of the first kind is the boarding-house mentioned by Dr. Christison in Skye, where for many years patients of this kind have been sent. Of the latter is the house of refuge in Edinburgh, which has been used for a number of years as a reformatory school for patients of the humbler classes affected with this disease. In addition to these houses, a number of individuals—clergymen, medical men and others, in different parts of the country—have been in the habit of taking boarders affected with this malady, with the view of curing them. In none of these places can the principle of treatment be efficiently carried out. The parties having charge of the patients have no legal authority to detain them, or to interfere with their personal freedom; and the consequence is, that they either leave before a sufficient length of time has elapsed to do any good, or they evade the surveillance under which they are placed, and manage to keep up the craving for stimulants by a constant system of smuggling and secret indulgence. It consists with my experience that this has been the result in all the institutions and houses of the kind mentioned, which I know of, in this country; and I believe every one will agree with me, who has had much experience in the treatment of this deplorable malady, that, in its chronic and confirmed form, complete absence from stimulants can only be effected by depriving the patient of his personal freedom.

In the present state of the law, this can only be done by obtaining a warrant for the detention of the patient in an asylum for the insane. And this method of treatment is now very commonly adopted in well marked and obstinate cases. I think some medical men, particularly in the country and in provincial towns, still entertain doubts as to the propriety of granting certificates of insanity in such cases. But the scruples of such are gradually wearing away, as the disease becomes better known and more fully recognized as a variety

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of moral insanity. It is now found, accordingly, that in all the asylums of England, Ireland and Scotland, such cases are constantly admitted, and regarded both by the medical superintendents, the commissioners of lunacy, and the sheriffs of our counties, as the proper objects of asylum restraint.

The principal ground, however, upon which it is contended that some new legislative enactment is required for the treatment of the cases of moral insanity under consideration, is that they cannot be detained long enough in asylums, under the present laws, for the purpose of effecting a cure of the disease. In regard to this point, I must confess that the difficulties I have had chiefly to contend with are such as could be obviated by no new act of legislation. Such patients, when removed too soon, have been so removed almost invariably by their own relatives, or on the advice of their own medical attendants. When they recover from the immediate effects of their habits of uncontrolled drinking, they appear so sane, they make so many plausible promises, and they are so full of self-reliance, that they generally succeed in persuading their friends that they ought to have a trial; or they try the art of intimidation—threaten to quarrel with their friends and cut them off without a shilling in their wills, unless they take them out, or threaten the medical attendants who consigned them to the asylum with actions of damages, unless they are immediately liberated, and so succeed in getting the one party or the other to recommend their liberation, rather than encounter the threatened alternatives. I cannot call to my recollection a single instance in which any such case of moral insanity has been ordered out of confinement by the legal authorities contrary to my advice, and before I considered the patient was justly entitled to a trial. I am quite willing to admit that, in many of the cases I have had under my care, the sheriff might have intimated his opinion that they ought to have a trial by being set at large, had his interference not been forestalled by that of the friends; but I feel confident that if such cases, by premature liberation, had relapsed and been sent back, their detention would not have been interfered with during a very considerable period of probation. And admitting, as I do, the necessity of a pretty long period of confinement, extending even to one or two years, or even more, for the cure of confirmed and chronic cases of this moral insanity, I cannot but admit at the same time the justice and propriety of giving patients of this class a trial, after their first confinement, at the end of three or six months, if they give any thing like a reasonable hope of

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doing well, and if their powers of self-control have been tested with favorable results. It has been my practice, and I believe it has been that of the physicians of other chartered asylums, to test the powers of self-control of such patients, after they have been sufficiently weaned, by abstinence, from their morbid cravings—to permit them to go beyond the asylum on their parole, to visit their friends, to spend a day or two with their relatives, or even to lodge for a week or two in the neighborhood; and if they display, under those circumstances, the ability to control their appetites and regulate their conduct, then I consider myself bound to liberate them; while, on the other hand, if they break through the restraints imposed upon them by their own voluntary pledges, and are unable to keep their promises and purposes of temperance, I consider myself entitled to prolong their period of confinement, and, in doing so, I have never yet been interfered with by the arm of the law.

The practice in other parts of the empire may be different—the views which some sheriffs, or the views which our newly appointed commissioners in lunacy may take of such cases, may be different; but I do think, as the real nature of this deplorable disease becomes more fully known, the administration of the existing laws must expand, so as to permit all that can be properly and wisely asked as to the duration of time required for the effectual treatment of such cases, with a view to their complete cure of a morbid, and incontrollable, and self-destroying appetite.

In fine, if the disease which we call moral insanity, or dipsomania, is not really a form of insanity, it would be very dangerous to legislate on the subject; but if it is a form of insanity—and of this, I think, we have no doubt—the existing laws regarding the insane ought to meet the requirements for its treatment; and, by a liberal and enlightened administration of those laws, I do not doubt they will be found to do so, without the necessity for new legislation. If any thing more is wanted, let some enterprising individual, or company, with a moderate capital, license a country-house surrounded with an agreeable landscape, and with grounds affording extended walks or drives, and the amusements of fishing and shooting; let the establishment command all the sources of recreation which a well arranged asylum possesses; and let it be designated by some appropriate and agreeable name—not "asylum," nor "inebriate asylum," like the American institution of the kind, which, I believe, did not succeed; let the patients of this class be sent to that sanatorium under a warrant of the sheriff as

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insane; and let them be treated according to the most approved principles of our art, under the direction of an enlightened physician, with an efficient staff of trustworthy attendants; and let patients be taken at different rates of board, suitable to their means, and I doubt not most of the difficulties at present felt in dealing with this disease, if not all, will be successfully met, and that such an establishment would soon be distinguished for its usefulness, and prove a valuable source of revenue to its proprietors.

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## II. *Illustrations of the reciprocal sympathies between the uterus and bladder in woman.* By W. F. Montgomery, M. D. Read before the Medical Association of the College of Physicians, 4th November 1857.

It is familiar to us all, that in the human female there is an intimate reciprocal sympathy between the uterus and bladder, and other parts of the urinary apparatus; so that, under a variety of circumstances, when the former organ is the seat of any anomalous action, or brought into a state of exalted sensibility, whether from natural or morbid causes, the latter is not only liable, but very apt to sympathize, and suffer correspondingly.

This is constantly exemplified in the increased urinary irritation so often accompanying ordinary healthy menstruation, and still more remarkably, when the latter function happens to be painfully performed. Again, in early pregnancy, the same thing is observed; and the remark is trite, that morbid actions in the uterus, whether benign or otherwise, often have the earliest announcement of their invasion, in symptoms of disturbance first noticed in the functions of the bladder.

Thus, congestion or slight ulceration of the cervix uteri, and still more strikingly, malignant affections of that part, frequently excite, in the first instance, in the patient's mind, only apprehensions of gravel, or some vesical disease, for which alone she is induced to seek advice; but woe betide us, in this and many other circumstances, if we let ourselves be beguiled into the belief that because a particular organ or locality is affected with certain anomalous symptoms, it is therefore the seat of some disease, of which these symptoms are to be taken as indications; and so prescribe. Could we, for instance, expect to cure the itching of the nose and

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angle of the eye which accompanies the presence of intestinal worms, by applications to the Schneiderian, or conjunctival membrane?

Mrs. C. had, for a long time, intense, intolerable, distracting itching of the perineum and anus, which really rendered her life miserable, and for which she had consulted many, and used a multiplicity of remedies; many of them, no doubt, very appropriate for pruritus, but not for her. When she came under my care, I also, at first, adopted the wrong course; I prescribed for the symptom, and not for its cause. But fortunately, after seeing her a few times, something led me to suspect the existence of intestinal worms. I gave her a dose of the kousso, which caused the expulsion of some very large lumbrici, and all her troubles were forthwith at an end.

Mrs. M. consulted me for pruritus of the pudendum, from which she suffered to such a degree, and it was accompanied with other symptoms of so distressing a kind, that she declared she loathed herself, and felt her life an intolerable burthen to her. She had used gallons of lotions, and all sorts of ointments, without the slightest relief. Examination showed an intense congestion of the cervix uteri; this was made the object of treatment, and on its removal, the pruritus and its miserable concomitants totally ceased.

I have already called the consent between the uterus and bladder a reciprocal sympathy, because it equally acts in the reverse direction, irritations of the bladder being frequently found to influence and disturb the functions of the uterus—a fact which should not be forgotten in practice, and especially in the treatment of the diseases of pregnancy, when the administration of the more irritating diuretics should be avoided, lest they should excite contraction of the fibres of the uterus, and so induce premature expulsion of its contents. That they are capable of so doing is, unfortunately, popularly known, and advantage is taken of such knowledge for base and wicked purposes.

And again, we must remember that vesical disturbances may produce a group of symptoms so closely resembling those arising from disease of the uterus, as to be mistaken for them.

Several years ago, there occurred in this city a case forcibly illustrative of this, and which excited no small sensation. The wife of a general officer, at that time holding the highest military command in this country, began to complain of distressing symptoms, having all the characters of those produced by uterine disease. Such was her own

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conviction, and on her consulting an accoucheur, then in large and high practice, her worst fears were confirmed; he pronounced the affection to be cancer uteri, and could only promise palliation. But she had many anxious friends, whose happy privilege it is always to hope for the best, and some of them urged upon her the necessity of having another opinion; to this she at last consented, and the gentleman called in pronounced the case to be one of stone in the bladder; the stone was extracted, and the lady passed at once from a state of pain and misery to one of comfort and happiness.

A few years since, a patient came to consult me, stating that, to gratify her friends, she had come to town for my advice, although quite aware that she could not be cured. She also handed me a written statement of her case, which set forth that she had had seven labors of terrible severity, owing to contracted pelvis, always requiring instrumental delivery; that for some months she had exhibited unequivocal symptoms of the existence of cancer uteri; and I confess that, from this account and the woman's own description of her symptoms, I thought there was little room for doubt as to the nature of her malady. However, I, of course, gave no opinion, and suspended my judgment until I should have instituted a careful examination; on doing so, I could discover no disease of the uterus, but the neck of the bladder was distended and felt very hard. I passed a sound into it, which at once struck against a stone of considerable size. Mr. Fleming now saw the case with me, the stone was removed, and the woman soon returned home well, and continued so.

It is not my intention to enter into a lengthened exposition of all the details of this part of our subject, but only to ask the attention of this distinguished meeting for a few minutes, while I review, as briefly as may be, some forms of disturbance of the functions of the bladder occurring at the time of labor. And I may just premise, that considering the frequency with which we witness such interchange of sympathies as we have been hitherto discussing, and their production, in many instances, from comparatively unimportant causes, we would anticipate from the close relation of juxtaposition between the uterus and bladder, and from the direct exposure of the latter organ to the powerful mechanical efforts of the uterus, as well as from the marvelous anatomical and physiological changes taking place in the latter, during pregnancy and parturition, and immediately after—we would, I say, be led to expect that the innerva-



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tion and powers of the bladder would be likely to exhibit still more marked and decided evidences of impairment, or some other abnormal condition, in the puerperal woman; and accordingly, in practice, we find that there are, at least, four forms of disturbance of the functions of the bladder, which are not unfrequently produced by parturition, even when that process is easy and natural:

1st. Irritability, causing an inconveniently frequent desire to discharge its contents; and this with a certain amount of pain.

2d. Loss of expulsive power; the natural sensibility being unaffected.

3d. Total loss of the natural sensibility, or irritability, which prompts to the evacuation of the contents of the organ.

4th. A peculiar form of hysterical retention.

The first two of these states require little more than to be glanced at; the third and fourth demand a somewhat more particular consideration.

1st. The irritability of the bladder which succeeds labor, almost always, yields readily to soothing measures, such as warm anodyne fomentations, a linseed meal poultice, opiate and camphorated embrocations, an opiate suppository in the rectum, or the administration of the mist. camphoræ c. magnesia, with tincture of hyoscyamus and syrup of poppy. Should there be reason for suspecting inflammation, it may be necessary to apply a few leeches, and use other appropriate remedies; but this is rarely the case.

2d. When the expulsive power is in abeyance, but the natural sensitive irritability remains unimpaired, the desire to evacuate the contents of the organ becomes distressingly urgent, in proportion to the amount of accumulation within it.

This condition is sometimes produced by pressure from the uterus happening to be larger or lower than usual, perhaps displaced, or from the presence of an uterine tumor, in which case, raising up the obstacle may remove all difficulty. Sometimes, merely permitting the patient to assume the sitting position may suffice. Should these plans not succeed, the introduction of the catheter gives the desired relief.

3d. Again, there is the third and most important variety, in which there is no irritability, not even the natural desire to evacuate the urine, nor sensation, nor consciousness of requiring to do so, although a large accumulation is taking place, which will soon produce symptoms, not alone very distressing in themselves, but, what is worse, conditions which

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may lead us greatly astray, and excite groundless apprehensions of great impending danger; and it will not lighten our discomfort, should it turn out, as has often happened, that the patient owes all her annoyance to our inadvertence, or to the carelessness of the nurse-tender; for if we are careful in making the requisite enquiries, and give the proper directions to the nurse, and she attend to them, the accident, of which I am about to speak, could not happen.

The first time I remember to have had my attention drawn to this condition was in the year 1832, and in the case of an esteemed medical friend's wife; who was delivered of her first child, after a natural labor of fifteen hours, presenting nothing unusual, if we except the most tremendous rigor I ever witnessed, which occurred shortly after delivery, and was so violent that I really thought it must have ended in convulsions; but simple means removed it, and she went on well. Before leaving her, I cautioned the nurse to encourage the lady to pass water in the course of the evening, as she had not done so for several hours; this, however, was neglected, as the lady neither expressed, nor felt any want; and, at my next visit, I found my patient very feverish, with headache; a pulse above 120; the belly tumid and tender to the touch. Before proceeding to introduce the catheter, of which she had a great horror, I advised her trying to pass water, which she did, to the amount of at least two quarts, with instant relief to all the symptoms. Her convalescence was uninterrupted.

At a time when there were occurring several cases of puerperal fever through town, a medical friend called on me to request that I would accompany him to visit a patient of his, who had been confined two days previously, after a severe and protracted labor. She was not going on well, and he thought he had to deal with a case of the above mentioned formidable disease, as his patient was very feverish, had most distressing headache, a rapid pulse, with abdominal pain, swelling and tenderness. On seeing her, I thought the presence of a large quantity of fluid was beyond doubt; a catheter was introduced, and an enormous accumulation of urine withdrawn, with immediate and decided relief to all the symptoms. It was then ascertained, that she had not passed water since her confinement, nor for many hours before it; she recovered perfectly.

The next case occurred to me under circumstances which invested it with a very unusual interest, and caused it to make a great impression on me. I happened to be staying for a few days in a very fashionable watering place in Eng-

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land, where there resided a family of great wealth and consideration in society; the eldest son of which had married a lady of large fortune and high connection. This lady had recently been confined of her first child; and, as may be readily supposed, the attendance upon her had been a matter of warm ambition among the local practitioners; and the gentleman who carried off the prize was, I fancy, more envied than congratulated by his confreres.

I met this gentleman accidentally in society, and the following morning he called on me in a state of painful agitation and distress; "I am," he said, "in a terrible dilemma, and fear I am a ruined man." He then proceeded to tell me that he had attended Mrs. *** three days before; that she had rather a severe labor; and that at the end of thirty hours, finding the labor not likely to terminate by the natural efforts, the head having remained stationary for several hours low down in the pelvis, and pressed strongly against its floor, he had delivered her with the forceps, without, as he assured me, any difficulty whatever. All then seemed well; but next day, the lady was uncomfortable, restless, feverish, and rather larger than she ought to be, and this state went on increasing until the third or fourth day, when, to his horror, the urine began to trickle away incessantly, and a slough, about the size of a sixpence, was discharged from the vagina. He at once, naturally enough, concluded that a vesical fistula was established; and I, taking his account as my guide, thought there was but little doubt that his worst apprehensions would be realized.

At his urgent request, I accompanied him to visit the lady, whom I found with a hot skin, much headache, a very quick pulse, a very distended abdomen, which was moreover so tender that she could hardly bear it to be touched; but I distinctly ascertained the presence of fluid. On examining per vaginam, I could not detect by the finger any breach of surface along the anterior wall, or back of the bladder, and I suggested to Mr. *** that it would be well to pass a catheter into the bladder; which, at his request, I did; and gave exit to a quantity of urine, sufficient nearly to fill an ordinary wash-hand basin. Subsidence of the abdominal swelling immediately took place, the lady felt inexpressible relief, and from this day went on well.

The truth was, that the bladder had been forgotten by all the parties concerned; and the patient had never passed water since her confinement, nor felt a desire to do so, until at last the bladder became so distended, that the resistance at its neck was overcome, and the urine leaked out at the

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front as fast as it was pumped in from the ureters at the back; and it so happened that, just as this began, a small slough had separated from the mucous membrane of the posterior wall of the vagina, which had been strongly pressed on by the head for several hours.

4th. Another state, not exactly ranging under any of the former kinds, seems to be of a purely nervous or hysterical character, and mixed up with a certain amount of mauvaise honte. The patient has a decided desire to pass water, and suffers distress from its retention; but has, at the same time, the greatest reluctance to make the necessary effort, and positively refuses to try, if any one, even the nurse-tender, is present, declaring that it would be impossible for her to succeed.

Under those circumstances, suitable arrangements should be made by the nurse, and the patient then left by herself, for a time, during which she may succeed in accomplishing the desired object; if she does not, some anti-nervous medicine should be given, with strong assurances of its potency in removing such difficulties; let her try again during our absence, and if she has not succeeded when we come to pay our next visit, we must declare that longer delay would be unsafe, that we will wait a little while in the drawing-room, and if she does not then succeed, that we must draw off the water before we leave the house; this generally insures success.

In many of these cases they do not succeed, because they do not make the proper effort; and this, I believe, is oftentimes, simply because they cannot, and not always because they do not choose; this state of nervous inability ought to meet with much tender consideration. I may observe here, that I have never met with this peculiar form of affection, except in the higher grades of society, and almost always in women of a highly sensitive nervous temperament, some of them having experienced a similar difficulty before marriage, and also under ordinary circumstances distinct from pregnancy.

Now, is this state which I have just been attempting to describe, analogous to, or identical with another, which I have a few times met with in practice, and which may be thus described?—A lady in perfect health retires to her bed room for the night, and before lying down to rest, attempts to make water, and finds she cannot—she is much surprised—goes to bed, and perhaps falls asleep; in the morning, she is in great distress, but still unable to empty the bladder, and now her pain is so great, she is compelled to seek for assis-

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tance—the catheter is introduced, and all her trouble is at an end; or, perhaps, for several days, its use continues to be required, and then all goes on as well as ever; but, in either case, no circumstance of general ill health, or local derangement or displacement, can be discovered. The woman, in fact, is otherwise quite well.

The year before last a married lady of a highly nervous temperament, so affected, drove six miles into town to my house, in great torture: I drew off the water, and she required no further assistance.

Last year, I was urgently summoned to see an equally nervous maiden lady similarly situated; on laying my hand on the abdomen, I felt a tumor, as large as a melon, and as hard as a cricket ball; and per vaginam, it really, at first, suggested the idea of a fibrous tumor of the uterus, this organ being quite displaced. I introduced the catheter, drew off a large accumulation of urine, and the abdominal tumor—which was nothing more than the distended bladder—at once disappeared. The feature in this case which particularly arrested my attention was, the extraordinary hardness and the distinct outline of the abdominal tumor, which would readily have caused it to be mistaken for a solid morbid growth.

I may here observe, that in the well known case of the virgin mock prophetess, Joanna Southcott, there was felt, by competent judges, a circumscribed tumor in the abdomen, which was supposed to be the gravid uterus. Dr. Reece, in his published history of the case, says: "In that part occupied by the womb, there was a firm circumscribed tumor as large as a man's head, bearing the shape of the womb; I have no doubt of its being an enlargement of that organ." But when she died, no tumor existed, and that which was felt during life was attributed to the prophetess having learned to retain the urine until the bladder became considerably distended; which seems highly probable.

In my case last related, it was necessary to relieve the lady every day for a week, when she perfectly regained the power of micturition. I may just mention, that the remedy which seemed to remove her inability was the ergot of rye. Did it do so by stimulating the fibres of the uterus in the first instance, and then, by consent, those of the bladder? Perhaps so; but as the same agent has produced a similar effect in men, a direct influence may be equally admitted.

*Dublin Hospital Gazette.*

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# CHRONICLE OF MEDICAL SCIENCE.

## PHYSIOLOGY.

1. *On the Variations of the Color of Venous Blood.* By Prof. CLAUDE BERNARD.

From the period of the discovery of the circulation, two descriptions of blood have been recognized; the one red or arterial, the other black or venous; and so characteristic has this difference in color of the arterial and venous blood been considered, that it has served since the time of Bichat for the anatomical division of the circulatory organs. The facts now about to be mentioned will prove that henceforth we cannot regard as synonyms the terms venous and black blood; some venous blood being found, in the normal condition, as red as arterial, and what is more, sometimes red and sometimes black. But what will most interest the physiologist is to learn that these variations in the color of venous blood correspond to different determinate functional conditions of the organs.

As long since as 1845, M. Bernard, while experimenting upon dogs on the eliminatory power of the kidney, was surprised at finding that the blood which left that organ by the vein was as red as that which entered it by the artery. Latterly, he has resumed the investigation of the subject at the College of France. The same phenomenon that had formerly been observed in the dog presented itself in the rabbit, and the red blood of the renal veins arriving and visibly mingling with the black blood of the vena cava inferior. The lumbar veins, on the other hand, discharged black blood very near the renal veins, as did also a small muscular vein which opened into the left renal vein. On multiplying the experiments, and varying the condition of the observation, it was soon found that the usual red color of the blood of the renal vein might change in shade, and, under the influence of certain circumstances, become completely black. Thus, contradiction would take place if we were contented with the announcement of a single observation. This may unfortunately be almost always the case in physiology, when we fail to distinguish amidst such complex

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phenomena, the eminently variable conditions which every living organism presents.

Having exhibited the two possible appearances of the blood of the renal veins, the next point was to examine what relation they held to the performance of the function of the kidney. To this end there was placed in the ureter a small silver tube, by which the urine was observed to flow drop by drop, almost continuously, as it is known to do. It was then found that the blood of the renal vein, as well as the tissue of the kidney, continued completely red as long as the urine flowed abundantly by the tube; but that this flow ceased to take place under the influence of circumstances which, while they rendered the blood of the renal vein black, gave at the same time a bluish tint to the kidney itself. Hence it would seem that the red color of the blood of the renal vein was referrible to the functional activity of the kidney, and its black color to the condition of repose or cessation of function. Moreover, it was found that the nature of the reaction of the urine excited no influence on the phenomenon; the blood of the renal vein being alike red in the dog with acid urine and in the rabbit whose urine is alkaline during digestion and acid after twenty-four or thirty-six hours of abstinence.

Without enumerating the various influences that are capable of disturbing the secretion of the urine, and leading to a change in the color of the blood of the renal vein, the author contents himself with adverting to the perturbation that may ensue from the mode of operating. If it is desired to observe the red color of the venous blood, the abdomen must not be largely opened and the intestines displaced, for then suppression of urine will almost immediately ensue, and the blood in the vein will often become as black as that of the vena cava. A small opening should be made in the lumber region, and especially on the left side, the left renal vein being more easily exposed in consequence of its greater length. Through the same wound the ureter may afterwards be isolated, so as to introduce the silver tube, in order to make certain whether during observation the function of the kidney continues to be carried on or not.

From what has been said it clearly results that the blood of this vein, presenting habitually a red color in connection with the formation of urine, which is almost continuous, does not correspond with the definition of venous blood already given. The first question that presents itself to the mind is whether this is an isolated fact, special to the kidney, or whether it may be extended to the secretory organs,

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whose function is, in like manner, the separation of a special organic fluid in their tissue. The submaxillary gland of the dog offers great facilities by its superficial and isolated position for the investigation of this point; the numerous anatomical varieties which its vein exhibits in no wise interfering with the observation of the physiological phenomena. In the first experiment the blood it contained was found as completely black as the darkest venous blood; but this arose from the fact of the secretion by the gland, which is intermittent, not then being active. When, however, some drops of vinegar were instilled into the mouth of the animal, which by its reflex action induced the secretory activity of the gland, the blood gradually but rapidly exchanged the black for the red color, the black color being again restored when the secretion had ceased. In order to render the interpretation of the phenomenon yet more positive, a small silver tube was introduced into the exposed excretory canal of the gland, and the nervous branch of the lingual nerve going to the gland was isolated. It was then found that as long as the organ remained in repose nothing passed by the tube, and black blood passed through the vein; while, whenever the nerve of the gland was excited by galvanism, and secretion was produced, the color of the blood became red, regaining its black color when the secretion was arrested after the cessation of the stimulation. The trial was made several times, and with similar results. There was always an interval of some seconds elapsed between the production or the cessation of the stimulus and the changes of color in the blood, as if the gland required a short period for the discharge of the blood it already contained. Moreover, it was observed that the blood flowed always more abundantly when red, that is, during the state of functional activity of the organ, than when black, the organs being then in a state of repose.

These two series of results obtained from the kidney and the submaxillary gland certainly do not constitute isolated facts; and the same observation should doubtless be extended to other glands. The investigations as yet made by the author on the parotid and on the glands of the alimentary canal have furnished similar general results; but the study of the subject will only be complete when each particular gland shall have been experimented on.

"It results from the facts now stated, that if in the physiological condition we may still designate arterial blood as the red blood, the appellation of black blood cannot in this general manner be conferred on venous blood. We have



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seen, in fact, that the venous blood may be found red or black in secretory organs, accordingly as these are observed in a state of activity or repose. This consideration of the activity and repose of the organ, which correspond in some degree to its statical and dynamical conditions, appears to me to be an important point for introduction into the chemical and physiological study of the blood. In fact, it is not alone by its color that the venous blood of an organ at rest differs from the venous blood of an organ in activity; but it presents also other important differential characters, which must depend upon a profound difference of the chemical constitution. Thus the venous blood of the kidney performing its function, which is red, is more diffluent, and sometimes even presents no coagulum; while the blood of the same vein, when the kidney has ceased to act, becomes black, and presents a consistent coagulum, etc. Without doubt physiologists and chemists have already learned that venous blood cannot, like arterial blood, be every where regarded as identical, and that it is necessary to analyze the venous blood of each organ in particular; but what, I believe, has never yet been stated, and which, nevertheless, seems to me indispensably necessary to be henceforth considered, if we desire that chemical analyses should prove as useful as possible to physiology, is the separate and comparative examination of the composition of the venous blood of the same organ when in repose and in activity. From what has been stated above, we may predict that there will be often found greater differences between the two bloods of the same organ in the state of activity and of repose than between the corresponding bloods of two different organs. This point of view is not solely applicable to glands, but should be extended to all the organs of the body, the venous blood of which will now have to be studied under these two conditions. We may in some measure characterize each tissue by the very different modifications its functional activity impresses on the blood that traverses it. Thus, if the blood quits glands when active reddened, it leaves a muscle that contracts with a very black color and different physical characters. The mechanism of these different colorations of the blood will necessarily receive its explanation through ulterior chemical analyses, of which we are only at present desirous of indicating the physiological conditions. We will conclude with the remark, that all these modifications which supervene in the blood as a consequence of the functional activity of organs are always determined by the nervous system. It is consequently at this point of contact between

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the organic tissues and the blood that we must acquire our ideas of the special part played by the nervous system in the physico-chemical phenomena of life. The development of the facts which relate to this point of general physiology will form the subject of an early communication."

*Comptes Rendus.*

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## MEDICAL PATHOLOGY AND THERAPEUTICS.

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1. *Diphtherite.*

At a late meeting of the Medical society of London, Dr. Camps read a paper "on the lately prevailing diphtheritic affection." The author stated that in his opinion medical practitioners exhibited a great want of precise knowledge as to the true nature of this disease. His own attention was drawn to the subject by observing, in one of the quarterly returns of the registrar general, a most unusual number of fatal cases of croup, stated to have occurred in a rural district with which he was personally acquainted; and he is inclined to believe that many of these cases, described as croup, were in reality diphtheritis. This form of disease, both here and in France, has more commonly assumed an epidemic than a sporadic character, and Dr. Camps was inclined to believe that many of the cases of severe throat disease, which occurred lately at Bologne, were instances of epidemic diphtheritis. All the severe cases which have come to the knowledge of the author occurred in rapid succession and in rather close proximity as to place, many having arisen in the same house, and others in the same town, village, or immediate vicinity. The type of the disease, in its severer forms, he regarded as being essentially asthenic, attended with diminution of vital force. The characters of the disease, as described by Bretonneau, were then briefly detailed, together with the symptoms and general features presented by the present epidemic, as recorded by observers in various parts of the country. Reference was also made to an extensive series of cases which occurred in Haverford west in 1849, and which were recorded by Mr. Brown of that place, in a paper published in this journal in the year 1850. During that epidemic that gentleman had attended two hundred cases, forty of which proved fatal.

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From all the facts which Dr. Camps had been able to collect, he was induced to conclude that the disease now prevailing was very analogous to, if not identical with, that described by M. Bretonneau as diphtherite; that it was mainly of an asthenic type, and was characterized, in the severer cases, by the formation of plastic pseudo-membranous exudations; that it is primarily pharyngeal in its seat, and not laryngeal, except secondarily and by complication; that it differs from stomatitis in intensity or degree, rather than in kind, and that its chief point of difference from the malignant sore throat of scarlatina is to be found in the tendency to the formation of plastic exudations; that it often possesses the characters of an epidemic; and that its adynamic type clearly indicates the mode of treatment which ought to be adopted. The treatment should be topical and general; the former consisting in the application of a strong solution of nitrate of silver to the parts affected, or a similar application of hydrochloric acid or chlorine; the general treatment should comprise the administration of chlorate of potash, with chlorine, or a combination of cinchona bark, or its alkaloid, with the mineral acids. In the severe cases, calomel should be given in repeated doses, until ptyalism is produced, and emetics in the early stage have been administered with good effect; and the powers of the patients should be supported by wine, stout, beef tea, and other invigorating means.

2. *Citrate of Iron and Strychnia a new Therapeutic Agent.*

For a long time back a therapeutic agent of very efficient properties has been used with considerable success at the Royal free hospital in cases of dyspepsia of an atonic character, by Dr. O'Connor. He has also found it productive of great benefit in similar conditions depending on functional derangement of the uterus. In these cases it acts as an emmenagogue when all other remedies have failed, and it has a powerful effect in tranquilizing the excitement of the nervous system. This preparation is a citrate of iron and strychnia, the dose of which is about three grains three times a day, to be taken immediately after a meal. There is now a case of chorea in the hospital under the care of Dr. O'Connor, immediately brought on by the patient being frightened by a thunder storm in August last, since which time she has, without any intermission of the symptoms, been a sufferer. In this case the citrate of iron and strychnia

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has been only used for a few days, and already with marked benefit. The case is one of interest, and we purpose at a future time giving it in detail. The preparation which Dr. O'Connor uses is made by Mr. Bastick of Brook street, Grosvenor square.

3. *Typhoid Fever in Algeria.*

M. Cordier states that in Algeria typhoid fever is never met with among the Arabs, nor among acclimatized Europeans, emigrants, indeed, only being liable to its attacks during the first year of their residence. According to M. Boudin's ideas this would be explained by the antagonism between typhoid fever and malarial diseases which are there prevalent. M. Cordier, however, believes that although some relation may exist between the two facts, no law on the subject can be laid down.—*Union Méd.*

4. *Syphilitic Enteritis.*

M. Cullerier in 1854 called attention to this form of secondary syphilis, and recently one of his pupils, M. Pillon, has published a thesis upon the subject. It manifests itself in the form of submucous gummy deposits, which do not go on to ulceration, but induce obstinate diarrhœa, and other symptoms of enteritis. It is by far most often observed in children, but it is also met with in the adult. It is a case that calls for delicate appreciation, as the mercurial treatment, so far from being contraindicated, constitutes the means of cure.—*Gaz. des Hôp.*

5. *Laceration of the Lung without Injury to the Thorax.*

An example of this lesion, which has been well described by M. Gosselin at length in the Mémoires de la Societé de Chirurgie, occurred recently to M. Dalmenesche, a provincial practitioner. A strong man, aged 24, was crushed between two railway wagons while in the act of coupling them, the compression taking place at the middle of the thorax. He died in a few hours, and at the autopsy considerable emphysema of the trunk and face was found, as well as a laceration of the middle lobe of the right lung, to the extent of about ten centimetres. There was no fracture

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whatever of the sternum, the ribs, or their cartilages; and the most minute examination failed to detect any laceration whatever in the pleura. No other organ was injured.—*Ib.*

6. *Diabetes in relation to Gangrene.*

As the conclusions of an interesting review of recent writings upon this subject, M. Fritz states:

1. That inflammatory and gangrenous affections of the skin and spontaneous gangrene are sometimes developed in persons who have suffered from diabetes for a greater or less time. An intimate relation exists between the two facts, but no theory at present satisfactorily explains such connection.

2. By curing or palliating the diabetes, the cause of these affections, we may hope for the cure of the latter.

3. When these affections pursue their habitual course in non-diabetic subjects, they do not seem to be accompanied by sugar in the urine.

4. Nevertheless, in some rare cases diabetes seems sometimes to appear in the acute form, in persons to all appearance in previous good health, during the course of extensive anthracoid inflammations, having a rapid course, and accompanied by severe septic symptoms.—*Archives Gén.*

7. *Chlorine Fumigations in Cholera.*

M. Nonat draws attention to the remarkable effects which, during the epidemic of 1854, the extrication of chlorine seemed to exert in preventing the propagation of cholera by patients admitted with that disease into his ward in La Pitie. He contrasts this result with what was observed in the same wards in 1849, and in those of his colleagues, in which chlorine was not employed. He employs the chloride of lime, distributing it in several smallish vessels through the ward, in preference to one or two large ones. Some of these vessels should be especially placed near the patients who are emitting the cholera miasmata in abundance. The fumes should not be disengaged in quantity sufficient to be perceived.—*Moniteur des Hôp.*

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8. *Modification of the Uterine Douche.*

M. Devilliers relates a case in exemplification of the modification he has introduced in Kiwisch's mode of employing the uterine douche for the induction of premature labor. In this case the ordinary douche had been employed several times in vain, when the author induced labor pains rapidly by propelling the water with some force between the membranes and the uterine parietes by means of an injection pump, to which a long curved metaliic canula was attached.—*Ib.*

9. *Injection of Carbonic Acid Gas into the Bladder.*

M. Paul Broca has endeavored to extend the anæsthetic application of this substance to painful affections of the bladder, introducing and letting it remain in contact with the organ. As a means of palliating pain, and relieving vesical tenesmus, some very remarkable results have been obtained. The bladder is distended with the gas, which becomes so slowly absorbed, that some still remains at the next miction, though this may not take place for three or four hours. The anæsthetic effect produced lasts for many hours.—*Ib.*

10. *Purulent Absorption in the Crimea.*

In a recent discussion upon this subject, M. Mounier observed that there is in the atmosphere quid ignotum, which, according to the medical constitution, renders operations innocent or dangerous, favoring or preventing purulent resorption. During the campaign in the Crimea he performed "two thousand amputations," in a hospital containing 600 wounded, between 15th September and 20th January, without a single case of purulent resorption occurring. After that period this accident became of quite ordinary occurrence, gangrene, scorbutus, and typhoid fever, it is true, raging with violence. The wards were encumbered with soldiers having their mouths bleeding, and their limbs frozen, and passing numerous stools. "My position then was a terrible one."—*Ib.*

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11. *Malva Moschata in Idiopathic Constipation.*

This substance, employed as a laxative by the Greeks and Romans, according to the investigations of M. Duvignac, forms the best substitute for castor oil, being as mild and as certain in its operation, without possessing its nauseous qualities. He administers it in the form of a bon-bon.—*Ib.*

13. *Artificial Rose Water.*

M. Rudolf Wagner has given us a pretty little prescription for obtaining artificial rose water. The products of the spontaneous decomposition of salicylate of potash are generally characterized by a strong perfume of roses. This salt is quickly obtained by decomposing salicylate of methylen (which can be bought under the name of essence of gaulteria), by caustic potash. In this manner a mass of crystals, consisting of salicylate of potash, are precipitated, and the supernatant solution has a strong odor of roses. This liquid gives by distillation an eau de roses of a very fine quality, which constitutes a delicious perfume.—*Illustrated Inventor.*

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# AMERICAN MEDICAL ASSOCIATION.

## ELEVENTH ANNUAL MEETING.

### WASHINGTON, MAY 4, 1858.

The association met in the lecture room of the Smithsonian institution, and was called to order at a quarter past 11 o'clock, A. M. by Dr. Condie of Philadelphia, when the chair was taken by the president, Dr. Paul F. Eve of Nashville, Tennessee. Vice-presidents Breckinridge of Kentucky, Reese of New York, and Campbell of Georgia, were also upon the platform; and at their table were the efficient secretaries, Drs. Foster of Tennessee and Semmes of this city, to whom we are under obligations.

Rev. Byron Sunderland, D. D. at the invitation of the president, offered an eloquent and appropriate prayer, invoking the blessing of Almighty God upon the convention.

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Dr. Harvey Lindsley of this city, chairman of the committee of arrangements, then delivered an

## *Address of Welcome.*

Mr. President and Gentlemen of the American Medical Association.—In behalf of the medical profession of the district of Columbia, I proffer you a cordial and hearty welcome to this, the political metropolis of our common country. It would have been highly gratifying to us to have done this several years since, if it had been consistent with the claims of other more favored places, for you then to have accepted our invitation so cordially extended to you, to meet in Washington.

It is now some twelve years since the organization of your association, and the annual meetings which, during that period, have been regularly held in every part of our extended country, have been reunions of kindred spirits, at once pleasant and instructive. Harmony has ever characterized your proceedings. Assembling from the remotest sections of the republic—from the Kennebec to the Rio Grande—from the Atlantic coast to the El Dorado of the West—you have met, as men devoted to the pursuit of science and philanthropy should always meet, in a spirit of union and concord.

You have left for a few brief hours the toils and privations of a laborious profession, in order, by a concentration of effort and interchange of opinion, to enlarge the boundaries of science and extend the usefulness of your calling. You are determined not to lag behind in this age of progress and discovery. You are resolved to effect every thing that the most resolute determination and the most persevering industry can accomplish for the promotion of knowledge and the good of mankind. Each revolving year witnesses important discoveries in physiology and medical chemistry, useful additions to our materia medica, new and valuable appliances and operations in surgery, more correct and philosophical views of disease, and, most important of all, improved modes and greater skill in its treatment.

You will return from these annual gatherings with fresh spirits and renewed hopes—with greater zeal and enlarged facilities for the advancement of your profession; and with redoubled energy to bear the sacrifices and endure the labor which its successful prosecution demands. Yours is emphatically a profession of self-denial and self-sacrifice. Much of your time is devoted to the care of patients where your only reward is the consciousness of duty discharged and suffering relieved. You visit, with equal solicitude, the humble and the elevated—the hovels of the poor and the mansions of the rich. "Pauporum tabernas, regumque turres."

We have not much as yet in our young and growing city to claim the attention of the votary of medical science. We have no hospitals with extensive wards and ample endowments, enriched by the benefactions of the benevolent and the accumulated wealth of centuries; no ancient and venerable universities with extensive apparatus, splendid museums, or immense anatomical collections, to interest and instruct you. We have done, however, what we could, and whatever we have is open to all, without restriction of sect or locality. But the day is not far distant, we trust, when, by the liberality of a great people, our public buildings, our literary and scientific institutions, our national parks and botanic gardens, will be worthy of the grand metropolis of a nation which, perhaps, within the next half century, will be the most populous, powerful, and wealthy in christendom. [Applause.]



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But, whatever may be our deficiencies, we can at least present you one spectacle which can be witnessed no where else—a sight worth a pilgrimage from the remotest bounds of the republic—we can show you the home of Washington—that Mecca of the American people—to which every patriotic heart will ever turn with sentiments of devoted affection and filial reverence. [Applause.]

Again, gentlemen, we welcome you to the hospitalities of our firesides and the still warmer affections of our hearts.

The secretary then called the roll by states, as it had been made out up to the commencement of the meeting, and the following delegates responded:

Maine 2, New Hampshire 8, Connecticut 18, Vermont 1, Massachusetts 40, Rhode Island 5, New York 73, New Jersey 25, Pennsylvania 66, Delaware 4, Maryland 24, district of Columbia 25, Virginia 8, North Carolina 8, South Carolina 10, Georgia 12, Alabama 1, Kentucky 9, Tennessee 7, Indiana 6, Illinois 12, Michigan 3, Iowa 3, Missouri 4, Ohio 14, California 1, American Medical Society of Paris 1, United States Navy 2.

[When the name of Dr. Harvey, who has come from California expressly to attend this convention, was called, there was loud applause.]

Other members were announced at different times during the day, and when the association adjourned there were four hundred and six names registered. A large increase is expected to-day.

Dr. Lindsley, chairman of the committee of arrangements, reported that it had been decided to hold but one business session each day, from 9 A. M. until 3 P. M. He also announced that the president of the United States would be happy to receive, with those members of the association who might call at the executive mansion at 8 o'clock in the evening, such ladies as may accompany them. [Applause.]

On motion, the association confirmed the appointment of Dr. J. M. Snyder to fill a vacancy in the committee of arrangements.

On motion, it was decided that a nominating committee of one from each state represented should be raised, the delegation of each state selecting its representative therein. A brief discussion upon the propriety of permitting the army and navy delegations to appoint separate members of this committee, was decided by the president in favor of their having the privilege, and the decision was sustained by the association.

There was then a recess of fifteen minutes, during which the different delegations assembled in various parts of the lecture room, to choose their representatives in the committee. After the meeting was again called to order, the secretary read the list as follows:

*Committee of Nomination.*—Job Holmes, Maine; George H. Hubbard, New Hampshire; P. Pineo, Vermont; Ebenezer Alden, Massachusetts; Ashbel Woodward, Connecticut; J. Mauran, Rhode Island; H. D. Berkley, New York; J. P. Colman, New Jersey; Isaac Hays, Pennsylvania; H. F. Askew, Delaware; S. P. Smith, Maryland; Noble Young, district of Columbia; A. S. Payne, Virginia; W. H. McKee,

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North Carolina; Wm. T. Wragg, South Carolina; Joseph P. Logan, Georgia; J. T. Hargraves, Alabama; R. J. Breckinridge, Kentucky; J. Berrian Lindsley, Tennessee; Wm. M. McPheeters, Missouri; Geo. Mendenhall, Ohio; Calvin West, Indiana; A. H. Luce, Illinois; Zina Pitcher, Michigan; Thos. O. Edwards, Iowa; O. Harvey, California; and George Clymer, United States navy.

On motion, Drs. Bohrer of D. C., Flint of New York, and Hargraves of Alabama were appointed by the president a committee on special essays.

Dr. David M. Reese of New York presented and read a written apology for having recommended for a position in Blockley hospital, Philadelphia, Dr. McClintock, who had been expelled from the association for a violation of the ethics and the etiquette of the profession, by publishing a work on "Domestic Medicine," &c.

On motion of Dr. Condie of Philadelphia, the apology was accepted, and ordered to be entered upon the minutes.

Dr. Bryan of Philadelphia, who had also recommended Dr. McClintock, made a verbal adoption of Dr. Reese's apology, the reception of which was warmly debated. Dr. C. C. Cox of Maryland opposed and Dr. Condie advocated the reception. Dr. A. B. Palmer of Michigan moved the previous question on a motion to refer the subject to a committee; which was lost. The apology of Dr. Bryan was then accepted.

[It was rumored in the hall that Dr. McClintock will be reinstated during the session of the association.]

The president then delivered, in a clear voice, and with a pleasing oratorical effect, his

## *Annual Address.*

Gentlemen of the American Medical Association—We meet under most auspicious circumstances, and have been welcomed to the most favorable position ever occupied by our profession on this continent. The very ground on which we stand may be considered sacred; has been set apart from a common to a special purpose, and is national. Invited as we have been to this magnificent temple, furnished and dedicated by a generous foreigner to science; in the presence of that towering monument, designed to commemorate the worth of him ever enshrined first in the hearts of his countrymen; surrounded by the glorious recollections constantly associated with this government; and before the great men and assembled wisdom of the nation; it becomes us to discharge the important duties which have called us together, with honor to ourselves and benefit to our profession. Inspired by its benevolent spirit, and invoking the aid of an ever present and omnipotent God to preside over our deliberations, we may here renew our professional obligations, learn to love each other better, and resolve henceforth to be more faithful to our high vocation, that its dignity may be maintained and its usefulness extended.

Knowing as I do full well the value of time in our short sessions, and how much is expected from this meeting, the half hour set apart for this customary address will be restricted to subjects appropriate to the occasion. From this stand-point in the history of our meetings, it is proper

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to recall what has already been achieved, that we may be better prepared profitably to engage in the labor now awaiting our deliberations. This summary of our transactions is the more necessary, since, by a disastrous fire in 1851, the first four volumes of our proceedings have been destroyed, and are, of course, inaccessible to all new members, the last report of the committee on publication having announced the fact that not one complete set of them was on sale.

The grand object of a convention of the physicians of the United States, held the previous year in the city of New York, was carried into effect in Philadelphia, May 1847, by organizing this association; and just ten years ago the first general assembly met in Baltimore. Since then annual meetings have been convened in our large cities for the transaction of business, and the proceedings regularly published each year. Ten large octavo volumes now comprise the Transactions of the American medical association, being the contributions of its two thousand members delegated to represent the medical institutions of thirty states and territories.

As set forth in convention, the ultimate purposes of this body are to cultivate and advance medical knowledge; to elevate the standard of medical education; to promote the usefulness, honor and interests of the medical profession; and collaterally to enlighten and direct public opinion in regard to the duties, responsibilities and requirements of medical men; to excite and encourage emulation and concert of action in the profession, and to facilitate and foster friendly intercourse between those engaged in it.

In carrying forward these desirable changes, embracing as they do medical science, medical education and medical ethics, no one believes that we have done every thing demanded for the good of the profession, or that all our great designs could have been attained in the brief space of ten years. The work assumed by the association, it was well known, would take time, labor and united efforts. It comprehended higher requisitions for admission into a learned profession; prescribed the course of instruction; demanded a separation in the teaching and licensing power; proposed a code to regulate the intercourse between physicians, their patients, and the public; and claimed that every one within its pale should assiduously cultivate the science of medicine and promote its best interests. And however extensive or radical may have been these contemplated plans, still on the whole it can safely be assumed that the American medical association has been no failure.

It has advanced medical knowledge, and promoted the usefulness of the medical profession. There will be found in the ten volumes of its printed Transactions the results of the meetings held in Baltimore, Boston, Cincinnati, Charleston, Richmond, New York, St. Louis, Philadelphia, Detroit and Nashville, that no less than three hundred pages are devoted to medical education; over five hundred to hygiene, including the sanitary condition of many of our large cities; six hundred to botany and indigenous plants; one hundred and fifty to obstetrics; four hundred to medical literature; seven hundred and fifty to medical science proper; more than a thousand to surgery, and two thousand to practical medicine, including the epidemics and prevalent diseases of nearly every state in the Union.

Special reports have been made from committees appointed for the purpose, on the effects of anæsthetic agents, ether and chloroform; on the influence of tea and coffee on the diet of children and the laboring classes; on the supposed influence of the cerebellum over the sexual propensities; the results of operations for the cure of cancer; the introduction of water and gas into cities; two reports on the blending

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and conversion of types of fever; the action of water on lead pipes, and the diseases proceeding from it; reflexion of the uterus; a nomenclature of diseases adapted to the United States, having reference to a general registration of deaths; the sources of typhus fever, and the means of their extinction, the permanent cure of reducible hernia; the topical use of water in surgery; the agency of refrigeration by radiation of heat as a cause of disease; the results of surgical operations in malignant diseases; the acute and chronic diseases of the neck of the uterus; the nature of typhoid fever; coxalgia or hip-joint disease; the treatment of morbid growths within the larynx; the sympathetic nerve in reflex phenomena; the medical and toxicological properties of the cytogamic plants of the United States; erysipelas; the influence of the hygrometrical state of the atmosphere on health; the diet of the sick; pathology, causes, symptoms, and treatment of scrofula; the preservation of milk; the effects of alcoholic liquors in health and diseases; hydrophobia; the changes in milk produced by menstruation and pregnancy; the sanitary police of cities; treatment of cholera infantum; use and effects of nitrate of silver applied to the throat; strychnine; infant mortality in large cities, the sources of its increase and means of its diminution; medico-legal duties of coroners; new principle of diagnosis in dislocation at the shoulder-joint; the flora, fauna, and medical topography of Washington territory; the nervous system in febrile diseases, etc. etc.

Prizes have been awarded by the association to the authors of the following essays, viz:

On the corpus luteum of menstruation and pregnancy, for 1851.

On the variation of pitch in percussion and respiratory sounds in physical diagnosis, for 1852.

On the cell, its physiology, pathology and philosophy.

And on the surgical treatment of certain fibrous tumors of the uterus, heretofore considered beyond the resources of art, for 1853.

On a new method of treating ununited fractures and certain deformities of the osseous system, for 1854.

On the statistics of placenta prævia, for 1855.

On the physiology and chief pathological relations of the arterial circulation, for 1856.

On the excito-secretory system of nerves, its relations to physiology and pathology.

And on experimental researches in relation to the nutritive value and physiological effects of albumen, starch and gum, when singly and exclusively used as food, for 1857.

Carefully prepared reports have been published by the association of the various epidemics and diseases which have prevailed during the past ten years throughout our widely extended country, and the mortuary statistics and public health of our large cities minutely ascertained. Charts, maps, diagrams, tables and plates have been freely employed to illustrate these subjects, so important to the general welfare of the people. Every state and territory, every large city and sick community, with scarcely an exception, has had its hygienic condition explored by this body; and dysentery and cholera, typhoid and yellow fevers have specially claimed the attention of our members. The communications on deformities after fractures, found in our eighth, ninth and tenth vols. constitute the basis of the best monograph ever issued from the press. This work, it may be predicted, will do more than all others to check the reckless and speculative spirit of suits for malpractice against medical men; for in addition to teaching a useful lesson to the profession in the prognosis of fractures, its testimony is so conclusive in reference to

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the usual results of these accidents, that judicial decisions must hereafter be regulated by it.

Besides these contributions to medical knowledge, this association has taken action to prevent the importation into our country of "worthless, adulterated and misnamed drugs, medicines and chemical preparations," for which a member of the United States senate has publicly declared that if we had accomplished nothing else, this alone should have entitled us to the gratitude of the nation; it recommended to the different states the adoption of a regular system of registration of births, marriages and deaths; memorialized congress to secure steerage passengers in our emigrant vessels medical attention, and due amount of space between decks; appointed a committee to ascertain the best means of preventing the introduction of disease by emigrants into our large cities; and considered many interesting individual cases.

This is a mere index to what the American medical association has done for medicine during the first ten years of its existence. A simple reference to the professional facts spread out upon its pages, is abundant and satisfactory proof how extensive, varied and valuable are its contributions to medical science, and its ten volumes an overwhelming and congratulatory answer to the taunting proclamation of the Edinburgh Review of 1820, "What does the world yet owe to American physicians and surgeons?" In September 1854, the editors of the Association Medical Journal of Great Britain published our code, and declared that this body of physicians was the most enlightened representatives of the greatest medical constituency in the world, of which it would be presumptuous in them to speak in terms of praise. They said of the volumes of the Transactions already published, that the duties of the standing committees have been ably and thoroughly performed; that the progress of medical science as a whole, its prominent divisions into practical medicine, surgery and obstetrics, carefully and accurately traced in a series of reports worthy of the highest praise, had been reported in a clear, concise and comprehensive manner, reflecting the highest credit upon the committees, and also upon the association in selecting them for their respective duties; and in regard to what has been done in the laborious investigation of the indigenous medical flora of the Union; examination into and reports upon the adulteration of drugs; sanitary condition of the various states, and difference between them in the public health; the study of epidemics and of special scientific subjects; the committees, continue these European medical authors, have collected and published a vast amount of highly valuable information. They moreover assert their belief that our success, especially in ethical reform, depends solely in the moral power inseparable from a constitution based upon the principle of equal representation, which they affirm they not only greatly admire, but can scarcely refrain from envying.

Here, then, is a reply to the above invective pronounced against the medical profession of America, voluntarily called forth from the countrymen of its author, and before he had been in his grave ten years,* by the contributions of this body, to medical science within seven years of its organization. Upon such disinterested evidence, such full, free and candid confessions, and from such a source, may rest the claims of the American medical association for proof of the benefits it has conferred on medicine. A most active and powerful agent in disseminating useful medical knowledge on this continent, it is highly probable that no similar institution has ever been more successful in carrying out its chief object—the promotion of science—than the one now assembled in this hall.

* Sidney Smith died in 1845.

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It has done something, perhaps all it could do under the circumstances, to elevate the standard of medical education. An influential motive calling forth this organization, was the proposed attempt to correct the defects in the plan of instruction, and conferring the degree then generally adopted in our medical colleges; and one of the first resolutions passed, even when the profession had assembled in convention, was the creation of a committee to report at an early day on these exciting subjects. Improvement in the system of teaching medicine, and a change in the power granting the diploma, if not reformation in the schools, have ever since agitated the profession, and consumed a considerable portion of the time of our sessions. The only power to control the economy of the colleges which this body possesses, is exclusively moral, advisory, or recommendatory, and not legislative or legal; and while it may be true that no set of resolutions presented by the several committees have been fully carried into effect, still it cannot be denied that important changes, calculated to advance medical education, have nevertheless been made. At least seven professors now compose the faculty in all our schools, the one or two exceptions to this being in those in which the science is taught nine consecutive months. Not less than a period of four full months' instruction now constitutes a course of lectures, and even this is exceeded in most of the institutions. But one annual course is now delivered with scarce an exception, and an interval is thus allowed for reading or private instruction. The association has clearly defined what shall be taught. It has enquired into the practical operations of all the colleges in the land; scrutinized the general condition of medical teaching in every state; compared it with that of the most enlightened nations; called attention to preliminary education, and declared what it ought to be; advised higher requisitions and a more rigid examination for obtaining the degree; and has, by its free discussions and oft reiterated expressions in regard to the business of teaching and regulating the schools, undoubtedly prevented greater abuses. It has never ceased to urge at every meeting the pressing necessity for a more thorough preparation and greater attainments in candidates for the honors of the profession.

This subject, gentlemen, is one upon which you will be called to take action. A committee chosen at Nashville is to report here on medical education. It is composed of gentlemen from different sections, who, while familiar with the systems of teaching medicine in our country, are yet disconnected from all the colleges. It would seem to be a desirable object to settle at this meeting the future relation of the schools to this association. Our sessions then might become less educational in character, and hereafter more scientific. And at the present stage of our proceedings, after all that has been said and done on this subject, the time has surely arrived for a decision. I cannot believe the colleges have any interested motives before this body; they of all others should be the last to oppose a more thorough cultivation of medicine, and ought by such a course to become unworthy of their trust, and unwelcome members of a great national congress of physicians, whose grand design is to promote medical science. We have now reached a period in our history when this voluntary association is to determine what medical organizations, be they state, county or city societies, hospitals, boards or schools, are entitled to be represented in its meetings. It alone can, of course, prescribe the requisitions for its own delegates. If created to improve and advance medical education (and this is in accordance with its own expressed declarations), then it is quite certain the schools must be controlled. It has but to speak on this point, and it

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will be obeyed; for it is now too late for any physician to oppose, or any medical college to set at defiance the moral power of this body.

As to the first object of an ethical nature over which the association designed to exert its influence, that of enlightening and directing public opinion in respect to the duties, responsibilities and requirements of medical men, we are free to confess little or nothing has been done. Nor is there much probability that any great change will soon, if ever, be effected. The work itself, in the very nature of things, is utopian. How is it possible to enlighten or direct the public mind on the economy of a science which it practically denies to exist? We ought to recollect that the time has not long passed since grave professors in our colleges signed certificates recommending nostrums; or what was done even last year in London, at Middlesex hospital, by its regular surgical staff. These reminiscences, however unpleasant, may serve somewhat to moderate our indignation against those who would insult the profession, or who entertain a very low estimate of the scientific acquirements of physicians, even at the present day. The profession must first fully comprehend its duties and responsibilities, and the proper and special qualifications for the practice of medicine, before any attempt can succeed to get the public to appreciate what these are, or acknowledge the ethical impropriety of employing secret remedies. If we make no distinction between the regular and irregular practitioner, between the physician and the proprietor of a nostrum, we are alone censurable that two such opposite characters are so generally confounded by the community. Until we are more honest, more united, truer to ourselves and our calling, and cultivate a proper esprit du corps, in vain is it to expect a change in public opinion regarding medical science. To prevent disease or relieve the sick is a most benevolent and honorable vocation, and when one conceals for selfish ends a valuable medicine, he ceases to be honest and is void of philanthropy; for, by attempting to place a moneyed valuation upon pain and life, he becomes a trader in human physical sufferings; he estimates in dollars and cents the groans and tears of his fellow-creatures. He may profess what he pleases, but his piety is not of the Bible, and has not a jot or tittle of christianity about it, for that teaches us to love our neighbors as ourselves. Eschewing politics, and seeking no aid from state or church, we should become a law unto ourselves, or rather act above all law save the divine, since it is quite certain we alone must protect the honor of the medical profession. And thank God, standing this day, the proudest of my life, before this goodly assembly, and at the capital of our common country, I can announce that here, to the American medical association, it may with safety be forever confided. By its recent acts, proclaimed throughout the length and breadth of this wide domain, this body has denounced all fellowship with irregular practices, and created a barrier impassable to honor and respectability.

Having learned wisdom from a more careful examination of the statistics and results of deformities after fractures, the question occurs if we have not ourselves unwittingly made patients expect too much from remedial agents. Disease in itself is a destructive process, which we can only prevent or relieve, and as, of course, we cannot create or restore, should we not, therefore, be more chary of the little word "cure?" The monument erected to Ambrose Paré, the father of surgery, bears the modest inscription, in reference to the wounds he treated, "Je les pansay et Dieu les guarit."* Empirics may boast that they cure, and

* Ancient French.

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doctors of divinity may sustain them, but the physician knows it is God who healeth all our diseases.

On that branch of ethics which relates to ourselves—that of encouraging emulation and concert of action among physicians, and fostering friendly intercourse in the profession—the association has been eminently successful. It has far exceeded the most sanguine expectations in overcoming all opposition; in creating an admirable code, now adopted every where; in organizing state, county and city societies; in bringing together physicians from the remotest parts of our immense territory; in awaking the whole profession to its true interests; and in blending us into a common harmonious fraternity. Without law or authority, but by moral suasion have we been united as one man, and possess this day the power to be felt over this entire continent. There never has been a more propitious period for medicine in America; never greater evidence of vitality and extended usefulness in our ancient and benevolent calling; never better feeling or more confidence of success than now by our united effort to do good in the great cause of suffering humanity.

We have seen, gentlemen, how much this association has achieved in its infancy to elevate honorable medicine. A wide field for scientific investigation is before us; much territory still remains to be redeemed; the wilderness is yet to blossom as the rose, and the leaves to be gathered for the healing of nations. The hygienic condition of the nation, of such immense interest to our people—that first, all important question, ever before the profession—the prevention of disease—is to be improved. We are to search after truth, and when found it is to be generously applied for the good of mankind. The work is a self-sacrificing and benevolent one, but it is grand and sublime, even God-like; for it has to do with pain and disease, life and death; and we rejoice to know that, whenever or wherever called upon, the members of our profession and of this association have never failed in any duty, and have been faithful to the end. Yea, many of them have stood alone between the living and the dead, and cheerfully laid down their lives to stay the pestilence and destroyer.

The very waters at our feet, as they sweep onwards to the ocean, pass in sight of a city where three years ago no less than four-fifths of our profession in that community, swelled, too, as their ranks had been by volunteers from this body, fell manfully contending with disease and death; and on a late occasion, when one of our steam packets, having been injured by a collision, went down in an instant, carrying every soul on board into the depths of the ocean, among the passengers was a member of this association. To the enquiry, where was he during the heart-rending scenes of a sinking ship, freighted with human lives, promptly came the affecting and sublime eulogy from one who knew him well, that so long as a woman or child remained unprovided for he* never left the ill-fated Arctic. How near akin was his gallant spirit to that of him, who, during a subsequent and similar occurrence, after seeing every woman and child committed to his care safely rescued from his foundering bark, after sending the last parting message to his family, and discharging every duty without one lingering ray of hope, calmly assumed his commanding position on the deck of his vessel, and as she glided from under him into the yawning billows, instinctively uncovered to meet his fate and his God. While the wild waves are sighing a requiem over the unseen burying places of these illustrious dead, the benedictions of a grateful people are continually ascending over the forty

* Prof. Carter P. Johnson of Richmond, Virginia.



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graves of the martyred heroes of Norfolk. These were our companions, who died in the noble service of that calling to promote the best interests of which has assembled us together.

Gentlemen of the American medical association—we have convened for important purposes; great events are before us; the interests of humanity are here; the hopes of the profession are in this meeting; the eyes of the medical world are upon us. May we then so act in view of surrounding circumstances, that "the skill of the physician shall lift up his head; and in the sight of great men he shall be in admiration."

On motion, the thanks of the association were voted to the president for his able and instructive address, a copy of which was solicited for publication.

Dr. Grafton Tyler of Georgetown, D. C., chairman of the committee on prize essays, reported that the essays received were three in number, each of which had been examined with great care; considering, first, the intrinsic merits of each essay, and then their merits in relation to each other. The first prize was awarded to an "essay on the clinical study of the heart sounds, in health and disease," bearing the motto, "Clinica clinice demonstrandum." The second prize was awarded to "an essay on vision and some of the anomalies, as rendered by the ophthalmoscope," bearing the motto, "Dux hominum medicus est."

Dr. Tyler then proceeded to open the sealed envelopes bearing the above named mottoes, and containing the names of the writers of the essays. The first was written by Dr. Austin Flint of Buffalo, New York; and the second by Dr. Montrose A. Pallen of St. Louis, Missouri. This is the second time Dr. Flint has won this distinguished honor, and the third time that it has been awarded to Buffalo since the association was organized, eleven years ago.

On motion, the report of the committee was accepted and adopted. Doctors Flint and Pallen were then invited to give resumés of their essays, which they did.

Dr. Lindsley, from the committee of arrangements, then presented an invitation from Dr. Nichols to visit the Insane asylum, and another from Rev. Mr. McGuire to visit Georgetown college.

On motion of Dr. Hamilton of New York, these invitations were accepted, and the thanks of the association were returned therefor.

On motion of Dr. Lindsley, the Hon. Doctors Fitch of Indiana, Chaffee of Massachussetts, Clawson and Robbins of New Jersey, and Shaw of North Carolina, members of Congress, and Dr. Peter Parker, ex-commissioner to China, were elected "members by invitation," and requested to participate in the proceedings of the association.

On motion, Assistant Surgeon Frederick A. Rose of the British navy, who so nobly volunteered his services on board the United States ship Susquehanna at Port Royal, and who came in her to New York, devoting himself to the sick crew, was unanimously elected a "member

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by invitation," and invited to take a seat upon the platform. [Applause.] It was announced that Dr. Rose has left the city.

Dr. Francis G. Smith of Philadelphia, chairman of the committee on publication, made his report, showing the expense of publishing the annual volume.

Dr. Caspar Wistar of Philadelphia presented his annual report of receipts and expenditures, showing a balance on hand of $806. Accompanying the treasurer's report was a resolution providing that the back volumes on hand, when over two years old, shall be sold at two dollars a volume, and that volumes V, VII, VIII and IX, of which there is a surplus, be sold at $5 a set to any member.

The special committee on medical education, of which Dr. G. W. Morris of Philadelphia is chairman, were called upon to report. There was no response; and, on motion, the subject was referred to the committee on nominations.

Dr. A. B. Palmer, chairman of the committee on medical literature, asked leave to defer his report until Wednesday at 10 o'clock; which was granted.

A report was made by the committee on nominations; which was accepted; and the association then elected the following

## *Officers.*

*President*—Dr. Harvey Lindsley of Washington city.

*Vice-Presidents*—Drs. W. L. Sutton of Kentucky, Thomas O. Edwards of Iowa, Josiah Crosby of New Hampshire and W. C. Warren of North Carolina.

*Secretary*—Dr. A. J. Semmes of Washington city. [The other secretary will be elected when the location of the next association is selected.]

*Treasurer*—Caspar Wistar of Philadelphia.

On motion, Drs. Flint of New York, Grose of Pennsylvania, and Gibbes of South Carolina were appointed a committee to conduct the president elect to the chair.

Dr. Lindsley having been introduced to the association by the retiring president Dr. Eve, made a few pertinent remarks, acknowledging the honor as the highest he had ever been called upon to receive, and the highest that any medical man in America can receive. [Applause.] Unaccustomed to preside over so large a body, and having had but little practice in presiding over smaller assemblages, he must throw himself upon the forbearance of the association and look to the members for support in the discharge of his official duties. [Applause.]

On motion, the thanks of the association were voted to the retiring officers for the able and impartial manner in which they have discharged the duties of their respective offices. [Applause.]

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On motion, the ex-presidents of the association present were invited to take seats on the platform.

The committee on medical topography and epidemics was called by states. A paper from the member from Maine stated that he will report next year. There was no response from New Hampshire, Vermont, Rhode Island, Connecticut, or Massachusetts. Dr. Smith of New Jersey read an able report on New Jersey, and the association then adjourned until to-morrow morning 9 o'clock.

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## *Evening Hospitalities.*

At 8 o'clock in the evening the delegates and the ladies who have accompanied them paid a visit by invitation to the executive mansion. The east room, with the adjacent suite of drawing rooms, were brilliantly lighted, and were filled by about five hundred gentlemen, representing all sections of the country, and a hundred or more ladies. One of the delegates had seen upwards of fourscore years—others have but just entered upon the practice of their profession.

The president received his guests, as they were successively presented by Dr. Cornelius Boyle, chairman of the committee of arrangements, with his accustomed cordiality, and afterwards moved about in the east room, engaging in conversation with the groups there gathered. The entire cabinet was present, with J. B. Henry, Esq. Marshal Selden and Commissioner Blake.

From the executive mansion the delegates generally proceeded to Georgetown, where they were hospitably entertained at the residences of Dr. Grafton Tyler, at the corner of Gay and Washington streets, and of Dr. Riley, No. 91 Gay street. A cordial welcome and good cheer awaited them at the houses of each of these distinguished practitioners.

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## WASHINGTON, MAY 5, 1858.

The association was called to order by the president, Dr. Harvey Lindsley, and A. J. Semmes, one of the secretaries, read the minutes of the first day's proceedings; which were adopted.

On motion of Dr. Watson of New York, Dr. Delafield of New York, one of the first officers of the association, was invited to take a seat on the platform.

On motion of Dr. Atkinson of Virginia, an amendment to the constitution was received, providing that no person shall be recognized as a

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member or admitted as a delegate at meetings of the association, who has been expelled from any state or local medical association, until relieved by action of such state or local association. [Applause.]

Dr. Atkinson supported the adoption of this amendment in an eloquent speech, contending that the admission of any gentleman who has been rebuked by any state or local association, and is under its ban, is a rebuke to that association. He urged the acceptance of the amendment, and trusted that until the constitution be so amended it shall be the rule of action.

Dr. Bond of Maryland asked to have the qualifications requisite for a seat read. He desired information as to the ethical qualifications for membership.

Dr. Watson of New York stated that, as by the constitution it was necessary to have amendments lie over one year, this was not a question for present debate.

The president decided that debate was not in order, and the amendment was accordingly laid on the table for consideration at the next annual meeting.

Dr. Boyle, chairman of the committee of arrangements, proposed the names of Doctors Huff and Knight, who were elected "members by invitation."

## *Report on Medical Literature.*

Dr. A. B. Palmer of Michigan, chairman of the committee on medical literature, made an able and interesting report. After noticing in detail the periodical literature of the country, the spirit manifested in the editorial department of our medical journals is characterized as being (with a few exceptions) liberal, honorable, courteous and just; and the feelings of fraternity are generally cordial and warm. Differences of opinion must be expected occasionally to exist, and different interests will sometimes come in collision; and while this is the case, the imperfections of our common nature will be likely to produce some unpleasant results. But the bond of union produced by an interest in a common cause, and that cause so noble as the advancement of a great and benevolent profession, should certainly, as it usually does, smooth down asperities, and preserve that courtesy and kindness which ever should exist between gentlemen and brethren. From the contentions existing between the different portions of our common country, and which have so deeply affected the political, the religious and the literary periodicals, the medical journals, with scarcely an exception, have kept aloof; and it is devoutly to be hoped that the influence of this portion of the press, combined with the harmonizing power of this association, may ever be exerted for the promotion of union both of hearts and states. [Applause.]

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The American medical literature of the past year was then reviewed, and said to have been of a creditable character, although it could not be denied that the fruits of the profession are more practical than scientific. The new American pharmaceutical association was noticed and complimented. The works auxiliary to medical science, issued by the federal government, were alluded to, and the example of the army and navy surgeons in taking meteorological and other observations, commended to the brethren in civil life. The theses on the Parish will case were noticed as exhibiting the pre-eminence of American over British physicians. [Applause.] Prof. Agassiz and the support of his labors by the American public, came in for a share of praise, and several improvements in medical instruments were mentioned.

In closing his report, Dr. Palmer presented the following resumé of the leading positions taken by the committee: The periodical literature of the United States is regarded as possessing great abundance, variety, richness and general excellence, and though still possessing defects, is constantly improving. Many of the contributions are of great weight and value, indicating an enterprising and industrious profession. Serious defects are regarded as existing in the review department, arising mainly from the fact that the income of the journals will not justify pecuniary disbursements for literary labor, and editors necessarily engaged in other pursuits cannot command the time, if all possessed the ability, to do the work thoroughly and well. [Applause.]

A few well supported journals, in place of the many but illy sustained, might tend to correct this evil; but the multiplicity of local journals is considered as peculiarly beneficial, by collecting from a greater variety of sources a larger number of facts, and developing the powers of a larger number of writers. The interests of this part of our literature demand a prompt and liberal pecuniary support.

The number of original American medical works is increasing, and their character is improving, and in some respects, particularly in practical utility, they will not suffer in comparison with those of Europe; yet serious imperfections exist, and great improvements are demanded. Great and permanent improvements in medical, as in general literature, must be gradual, depending more upon the advancement of education, of taste and intelligence, than upon any specific measures which may be adopted. Still, various particular measures, such as the permanent writing of medical theses during professional pupilage, and keeping systematic records of cases when in practice, would do very much in hastening an improvement. But for the greater perfection of our literature, we must wait the further development of our country, and for those changes of time and circumstances which shall produce a larger number of devoted savans and scholars, placing them in situations where a variety of absorbing pursuits shall not prevent the concentration of great talents upon a comparatively limited range of subjects.

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On the subject of the reprint of foreign works, it is held that, while the free circulation of the best class of these works among us increases the knowledge and improves the taste of the masses of the profession, it does not interfere with the production of the higher order of original works; and that the moral obligation of our government to join with Great Britain in the enactment of an international copy-right law, is by no means clearly established.

In conclusion, the committee would say that if, as sentinels placed upon the walls of our medical Zion, they are asked in relation to its literature, "What of the night?" the response must be, "The morning cometh!" The darkness which has hung over that literature is breaking away. There is at least dawning in the East, and though the chariot of day may roll on but slowly, the full effulgence will come at last. [Continued applause.]

On motion, the report was accepted, and ordered to be published.

On motion, Dr. Bozeman of Alabama was elected a "member by invitation."

## *Report on Medical Education.*

Dr. James R. Wood, chairman of a special committee on medical education, made a lengthy report, discussing—1st, primary medical schools; 2d, the number of professorships in medical colleges; 3d, the length and number of terms during the year; 4th, the requisite qualifications for graduation; 5th, such other subjects of a general character as to give uniformity to our medical system. Having reviewed these propositions at length, the committee have arrived at the following conclusions:

First—Primary medical schools should be encouraged—but, as office instruction will continue to be sought by students, practitioners should either give them necessary advantages of demonstrations, illustrations and recitations, or if not prepared to do so, they should refer them to such primary schools or medical men, as will give them proper instruction.

Second—The number of professorships should not be less than seven, viz: a professor of anatomy and microscopy, physiology and pathology, chemistry, surgery, practical medicine, obstetrics, and materia medica.

Third—There should be but one term annually, which should commence about the 1st of October, and close with the March following, thus lengthening the term to six months. The commencement of the term, in October, should be uniform in all the colleges throughout the country. During the session there should never be more than four lectures given daily.

Fourth—The qualifications for graduation, in addition to those now required by the schools, should be a liberal primary education, and attendance upon a course of clinical instruction in a regularly organized hospital.

In order to give our medical colleges an opportunity to consider the recommendations here advanced, and that this body may have the advan-

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tage of their wisdom and their mature views, before any definite action is taken upon them, your committee submit to the association the following resolutions:

Resolved, that the several medical colleges of the United States be requested to send delegates to a convention to be held at on the day of for the purpose of devising a uniform system of medical education.

Resolved, that the present report of the special committee on medical education be referred to such convention for its consideration.

Resolved, that said convention of delegates from the several colleges of the United States be requested to submit to the meeting of this association in May 1859, the result of their deliberations.

On motion, the report was accepted and referred to the committee on publication, the accompanying resolutions being laid on the table.

The committee on nominations reported Louisville, Kentucky, as the place of meeting in 1859, and nominated Dr. S. M. Bemis of that city as second secretary. They also nominated the following standing committees:

*Committee on Publication*—Dr. Gurney Smith, Pennsylvania, chairman; Drs. Caspar Wistar, Pennsylvania; A. J. Semmes, district of Columbia; S. M. Bemis, Kentucky; S. L. Hollinsworth, Pennsylvania; S. Lewis, Pennsylvania; H. F. Askew, Delaware.

*Committee on Medical Literature*—Dr. John Watson, New York, chairman; Drs. L. A. Smith, New Jersey; C. G. Comegys, Ohio; R. W. Gibbs, South Carolina; W. M. McPheeten, Missouri.

*Committee on Prize Essays*—Dr. J. B. Flint, New York, chairman; Drs. M. Goldsmith, New Jersey; H. Miller, Kentucky; Calvin West, Indiana.

*Committee on Medical Education*—Dr. G. W. Norris, Pennsylvania, chairman; Drs. A. H. Luce, Illinois; E. R. Henderson, South Carolina; G. R. Grant, Tennessee; T. S. Powell, Georgia.

*Committee of Arrangements*—R. J. Breckinridge, Kentucky, chairman; Drs. G. W. Ronald, B. M. Wible, D. W. Goodall, D. D. Thompson, N. B. Marshall, G. W. Burglass, R. C. Hewett and A. B. Cook, all of Kentucky.

The report was accepted, the nominations were confirmed, and the committee received permission to sit again.

On motion of Dr. Hamilton of Buffalo, the resolutions attached to the report of the committee on medical education were taken from the table.

Dr. Watson moved the appointment of a committee to consider the resolutions and report to-morrow morning.

Dr. Bond thought that the subject had already been sufficiently discussed. It had been brought up year after year, occupying much of the time of the association, and he trusted that it would receive immediate consideration.

Dr. Davis of Illinois wished to have the subject made a special order for some time prior to the adjournment of the convention.

Dr. Rogers of New York wished to have the report printed, that all

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might have an opportunity of examining it and the propositions which it embodies.

Dr. Wood defended his report as a conservative report, just alike to the profession and to the laymen. He did not believe that any good could arise from a further discussion of the subject. None had arisen in years past—none could arise now. It was a bill of conciliation and of adjustment. Laymen of the profession merited censure for sending men to college not qualified for the profession, and colleges merited censure for sending men out not qualified to practice the healing art. [Applause.] He approved of the motion of Dr. Watson, that the report be submitted to a committee of delegates from colleges.

A debate on a call for the previous question on Dr. Watson's resolution then ensued, in which several gentlemen joined, each one apparently having a different idea of "parliamentary law," and neither of them displaying a very correct knowledge of the subject. It was remarked by an old member of the association, that "parliamentary discussion must be a local epidemic."

The report was finally referred to a select committee, to be composed of one member from each delegation representing a medical college or school.

On motion, thanks were voted to the late secretary, Dr. Foster, and his successor, Dr. Bemis, took his seat.

Dr. Hamm of Pennsylvania moved a suspension of the rules for the purpose of reconsidering the resolution of Dr. Condie accepting the apology tendered by Dr. Bryan. The vote upon suspending the rules stood—ayes 111, noes 82. The president ruled that a two-thirds vote was necessary, and decided the question as lost.

An appeal was taken from the decision of the chair, and the decision was not sustained. A vote was then taken, and the resolution accepting the apology of Dr. Bryan was reconsidered by a vote of ayes 142, noes 70.

An attempt was then made to connect the resolution with that accepting the apology of Dr. Reese, but it was decided that it would first be necessary to dispose of the resolution reconsidered, and it was laid on the table.

A member from New Jersey hoped that the McClintock case would be brought fairly and squarely before the association, and that gentlemen would be made to "face the music." It was useless to cloak it, or to attempt to dodge the responsibility.

Dr. Beck of Indiana moved an indefinite postponement of the whole subject.

Other gentlemen rose to speak, but the president decided that a motion to postpone was not debatable.

Dr. Jewell rose to a point of order, and protested against being "gagged." [The president here reversed his decision.] Dr. Jewell said that



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the action of the day previous was regretted, and that gentlemen had acted hastily. Many, who at first sight voted to accept the apologies, now regretted having done so.

Dr. Hamm of Philadelphia explained the action of the Philadelphia county medical society, and began to read a remonstrance from it, which he desired to incorporate into his speech.

Dr. Biddle objected to the reading of this remonstrance, as a violation of plighted faith.

It was here moved and decided that the association go into "committee of the whole," and Dr. Edwards of Ohio was called to the chair.

A member hoped that there would be no rules of order except what the chair would prescribe.

The Chair. "I will prescribe enough." [Laughter.]

Another member enquired if it would be proper to discuss the remonstrance?

The Chair. "A gentleman who has the floor can discuss any thing on the face of the earth." [Laughter and applause.]

The remonstrance was then read. It was a long document, giving a detailed account of the recommendation by Dr. Reese of Dr. McClintock for a position in Blockley hospital, after the last named gentleman had been guilty of selling quack nostrums, and had thus committed an offence against the ethics of the profession.

Dr. Humphries of Indiana moved that each member of the committee of the whole be restricted to five minutes, allowing Dr. Reese whatever time he wished to defend himself in.

Dr. Phelps showed that a ten minutes rule was now in force. Dr. Cox moved, as an amendment, to make the time fifteen minutes; which amendment was lost, and the original motion of Dr. Humphries was then carried.

Dr. Reese then ascended the platform, and made a statement of his position from the commencement of the controversy. He considered his apology of the day previous a satisfactory one, but was willing to make it more so if it was objected to. He had not brought the subject before the association, but had been given to understand that if he made the apology which he had made the remonstrance would not be offered. During his remarks there was a demand for the reading of the apology; which was read, as follows:

To the Officers and Members of the American Medical Association.—The undersigned, one of the vice-presidents of the American medical association, having, during the interval since our last annual meeting, certified to the professional fitness for the charge of the Blockley hospital at Philadelphia, of an individual who had been expelled from this body for a violation of our code of ethics, after consultation with the other officers, and yielding to the advice of other personal friends, desires to say to the association now assembled:

1st. That, in giving said certificate, he was prompted solely by mo-

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tives of sympathy and humanity to a fallen brother, who had been a personal friend prior to his offence; and that he did not realize, acting under the impulse of the moment, that his individual act could be construed by the profession as indicating hostility to his brethren.

2d. That while his own mind is clear that his certificate contained only the truth, and that, under his peculiar relations to the party concerned, he could not withhold his certificate of medical qualification, consistent with conscience and duty, yet he is ready to concede that he had no abstract right to relieve the party from the censure of the association until this body had restored him to his fellowship.

3d. That, so far from intending any disrespect to the association, or to its act of discipline, the undersigned had publicly sustained and defended both. He therefore disclaims the inference from his certificate that he intended to recommend to a high professional office a man whom the association had excluded, and thereby nullify the action of this body.

And, finally, with these statements and disclaimers, the undersigned, while retaining his own opinion of the rectitude of his motives, and of his duty, under the peculiar circumstances of the case, is nevertheless prepared to defer to the judgment of those whom he knows to be his friends, that he erred in doing what he had no right to do, in view of his official position in the association, and is hence called upon to offer this explanation and apology to his brethren.

Signed,

DAVID M. REESE.

It was moved to refer the apology and remarks of Dr. Reese to a special committee of seven, to report to-morrow morning. Dr. Atlee of Lancaster and other gentlemen urged delay.

Dr. Payne of Virginia asked permission to relate an anecdote. He was reminded of two old Quakers, one of whom kept a store, while the other practiced law—both were members of a temperance society, and it was generally thought that the lawyer did not always keep his pledge. One wet, cold day, a negro man went to the Quaker's store, and the good man gave him a drink of brandy. This was brought to the notice of the temperance society, and it was decided that the offender should be severely reprimanded. The lawyer was selected to carry out this sentence, and, taking the store-keeper into the woods, he thus addressed him: "Jeemes, thee should be more circumspect!" [Continued laughter.]

Dr. Condie of Philadelphia wished to say that he had offered the resolution in good faith, but he denied that he had made propositions to the gentleman from New York, or that the Philadelphia committee had.

Dr. Bowling of Tennessee said that there was no question of veracity. Gentlemen on either side were correct. He had heard of misunderstanding and of probable difficulty, and had earnestly endeavored to arrange it. He had told Dr. Reese that if he made an apology, the remonstrance would not be presented, because he had understood gentlemen from Pennsylvania to say so. But he was now aware that these

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gentlemen did not in any way pledge the Philadelphia county medical society.

Dr. Condie hoped that a committee would be appointed to give the subject a careful consideration.

Dr. Cox of Maryland, after complimenting Dr. Reese as an able practitioner and an experienced editor, whose labors have been of great value to the profession and to the country, said that he did not consider the statement full and satisfactory. The offence was not an unpardonable one, but the violation of that code of ethics which is the life of the profession, should be properly atoned for. [Applause.] The apology was good enough, but it carried as its sting the mental reservation which Dr. Reese persists in. Nay, in his journal, issued simultaneously with this meeting, and circulated here, he says: "Having done right in certifying to the labors of our quondam friend McClintock, we resented the unmerited censures of our Philadelphia brethren." This completely stultifies the effect of the apology.

Dr. La Roche of Philadelphia explained his action and that of the Philadelphia county society in the matter.

Dr. Paine of Vermont, Dr. Cox and Dr. Bond made some rather sharp remarks. Dr. Davis of Massachusetts thought that Dr. Reese had but to admit that he had done wrong, and ask pardon, without any mental reservation.

Dr. Reese said that he had intended to make a satisfactory apology. Such was his earnest wish and desire, and he wished to frankly state that he had no mental reservation, neither did he attempt to conceal any thing. He made the statement which had been read without reservation and without evasion. [Applause.]

Dr. Condie expressed his entire satisfaction, as did numerous other gentlemen, several crossing to where Dr. Reese was sitting, and shaking hands with him.

The committee of the whole then rose, and the chairman reported to the president that the committee had heard and discussed the apology of Dr. Reese, and that they considered that it was "ample, full, complete and satisfactory."

On motion, the report of the committee was received and adopted.

The case of Dr. Bryan then came up, when it was suggested that his apology should be in writing, he expressing a willingness to make one as ample as was that of Dr. Reese.

Dr. Reese then drafted an apology, but several gentlemen insisted that he should insert the word "regret." Dr. Reese declined, stating that no gentleman would apologize for that which he did not regret, and that he would never be dictated to by any gentleman, even if the prison door stood open on his right hand, and the stake was at his left hand.

Dr. Wood (who was greeted with loud applause) stated that he had

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been with the side which had offered the apology, but he did not consider the apology complete without the insertion of the word "regret."

Drs. Bonner, Clark of New Jersey, Hard of Illinois, Parker of New York and other gentlemen participated in an exciting debate on the necessity of having the word "regret" inserted.

Dr. Reese added the following sentence, "and regrets that he has incurred the displeasure of his brethren." This was not favorably received.

Dr. Boyle, chairman of the committee of arrangements, here announced that arrangements had been made by which delegates who had purchased tickets on their way to the convention over the following roads, could return free by exhibiting their cards of membership: Pennsylvania, Wilmington and Manchester, Illinois Central, Northeastern South Carolina, and Richmond and Petersburg.

The apology of Dr. Reese was again taken up, and discussed with spirit, although there was no manifestation of bad feeling on either side. At length he presented the following:

"The undersigned regrets that he certified to the professional qualifications for Blockley hospital, Philadelphia, of an expelled member of this body, and hereby offers this apology for his departure from the ethical code."

This was received with loud applause, and, on motion of Dr. White, accepted as an ample and satisfactory apology.

Dr. Bryan submitted a similar apology, which was also accepted, and then the committee adjourned until to-morrow morning, 9 o'clock, evidently well pleased that this question was finally disposed of.

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## *Hospitalities.*

At 5 o'clock P. M. the delegates went in omnibuses provided for their use to Georgetown college, by invitation of the faculty. After examining this fine institution, which commands a magnificent view, and visiting its fine library, museum and apparatus room, the party were hospitably entertained; after which, they returned to this city. In the evening there were entertainments given them at the residence of Dr. Thos. Miller, 246 F street, Dr. Wm. P. Johnson, 466 Seventh street, and Dr. A. Y. P. Garnett, 465 Ninth street.

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## WASHINGTON, MAY 6, 1858.

The president, Dr. Lindsley, called the association to order at half past 9 o'clock. The secretary not having his minutes in readiness, the reading of the minutes of the day previous was dispensed with.

Dr. Grant of New York asked leave to present a complaint against the New York medical college; but upon information by Dr. Edwards that a committee on ethics would be recommended by the nominating committee, he withdrew his request.

The minutes were then read. Several proposals to amend them were made, and either ruled out of order or withdrawn.

The appointment during last year of Dr. Geo. Haywood of Boston as a delegate to represent the American medical association in kindred societies in Europe, was announced by Dr. Ere.

### *Medical Education.*

Dr. Hamilton, from the committee of delegates from medical schools and colleges, to whom was referred the report of the special committee on medical colleges, reported the following preamble and resolution:

Fully appreciating the value and importance of the resolution under which they were appointed, but a majority of the gentlemen constituting this committee not being authorized by the medical faculties of the several colleges with which we are connected to act as their representatives in this matter, and therefore regarding it quite impossible to secure a convention of delegates in the interim of the meetings of the association: therefore,

Resolved, that we recommend to all the medical colleges entitled to a representation in this body, that they appoint delegates, especially instructed to represent them in a meeting to be held at Louisville on Monday, the day immediately preceding the convention of the American medical association for the year 1859, at 10 o'clock, at such place as the committee of arrangements shall designate.

The report was accepted, and the preamble and resolutions were passed; after which, several gentlemen claimed the floor, but the president decided that the reports of special committees were in order, the reports of committees on medical topography and epidemics having previously been referred to the committee on publication without reading.

Dr. Foster Jenkins of New York read a report on the spontaneous umbilical hemorrhage of the newly born; which was read and referred to the committee on publication.

### *Marriages of Consanguinity.*

Dr. S. M. Bemis of Kentucky read an able and learned report on the "influence of marriages of consanguinity upon offspring," from which we extract the following valuable statistical information:

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Your reporter has made great effort to ascertain the proximate per centage of the deaf and dumb and blind in our asylums who are the descendants of blood intermarriages. This effort has not been successful, from the difficulty principals of such institutions find in gaining the requisite facts. Parents are often sensitive on this score; and it is a delicate matter for principals to attempt investigations which the friends of the beneficiaries suppose to be unauthorized by the regulations of their various institutions.

I feel, however, that my researches give me authority to say, that over ten per cent. of the deaf and dumb, and over five per cent. of the blind, and near fifteen per cent. of the idiotic in our state institutions for subjects of those defects, are the offspring of kindred parents.

Aside from the facts which I have gained by corresponding with gentlemen who have given close attention to these points, a curious but perfectly legitimate process of computation confirms me in the opinion that those estimates are very nearly correct. The classes C, D, E, F, G give 787 marriages of cousins, 246 of which have given issue to deaf and dumb, blind, idiotic or insane children. Admitting the same ratio to prevail, the Ohio report, which contains 157 marriages of cousins, followed by deaf and dumb, blind, idiotic or insane offspring, would indicate the existence of 332 other marriages of cousins in the same population not followed by such defects. The counties which furnish this 151 marriages as above, and are supposed to comprise in their limits 332 unreported marriages, making a total of 483, contained in 1850 a population of 1,528,238. If the same ratio be supposed to exist throughout the Union, there would be found to the twenty millions of white inhabitants six thousand three hundred and twenty-one marriages of cousins, giving birth to 3,909 deaf and dumb, blind, idiotic and insane children, distributed as follows:

| | |
|---|---|
| Deaf and dumb, | 1,116 |
| Blind, | 648 |
| Idiotic, | 1,854 |
| Insane, | 299 |

Then, if the figures of the last United States census still applied to our population, there would now be found in the Union:

9,136 deaf and dumb, of whom 1,116, or 12.8 per cent. are children of cousins.

7,978 blind, of whom 648, or 08.1 per cent. are children of cousins.

14.257 idiotic, of whom 1,844, or 12.93 per cent. are children of cousins.

14,972 insane, of whom 299, or 01.9 per cent. are children of cousins.

I invite the attention of gentlemen of this association to this calculation of probabilities, either to confute or confirm it by any facts in their possession.

A very cursory examination of the tables of my report will suffice to show that pari passu with the increment of the same blood the sum of defects of offspring is likewise increased. Classes D and G present exceptions to this rule. As it regards D, the supposed reason for this deviation has been already stated, namely, that its mortality list is so large; while class G presents so few observations as to satisfy us that they attracted notice solely because of their unfavorable results.

## *Stone contributed to the Washington Monument.*

Dr. John L. Atlee, from the committee appointed at the annual meeting at Richmond in May 1852, to procure a stone with a suitable in-

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scription to be inserted in the Washington national monument, made a final report. It stated that Mr. Haldy, a marble mason of the city of Lancaster, Pennsylvania, had in his employment a young man, Mr. J. Augustus Beck, a native of Litiz, Pennsylvania, who had given unmistakable evidence of genius as a sculptor. At the suggestion of the late lamented Dr. A. L. Pierson of Salem, Massachusetts (made at the meeting in New York just ten days before his death), the design of the celebrated painting of Girodet-Tricoson, representing Hippocrates refusing the presents of the Persian King, Artaxerxes, and his invitation to leave Greece, and reside and practice among her enemies, was selected. This was sculptured upon a block of Vermont marble, with the motto, "Vincet Amor Patriæ," and the stone is now at the monument grounds. The entire expense was $1,000, of which one-half was paid to the young artist. The amount contributed by members individually was $501 30; the balance was voted from the treasury of the society. Accompanying the report was a letter from the secretary of the Washington national monument association, and a resolution of thanks to the rail road companies by whose liberality the stone was brought from Lancaster to Washington free of charge. The report was accepted, and the resolution was passed.

## *Report on the Functions of the Cerebellum.*

Dr. Palmer of Buffalo read a report, made by Dr. E. Andrews of Chicago, Illinois, on the "functions of different portions of the cerebellum," of which the following is an abbreviated report:

The cerebellum is divisible into three lobes—one median and two lateral.

The muscular system of most animals is divisible into two groups, viz: those which act upon the anterior extremities and the adjacent parts of the trunk, and those which move the posterior extremities and the corresponding portion of the trunk.

The report shows that there is a direct ratio between the strength and bulk of the anterior group of muscles and the size of the median lobe of the cerebellum.

Also that the lateral lobes manifest a double ratio, their size being as the strength of the posterior group of muscles, and also as the size of the hemisphere of the cerebrum.

It is inferred that the action of the cerebellum is to excite motion, and not merely to co-ordinate it; that the influence of the median lobe is chiefly expended upon the anterior group of muscles, and that the action of the lateral lobes is in some manner double, part of their influence acting upon the posterior group of muscles, and part of it having some relation to mental power, whose exact nature is not yet understood.

The facts and arguments are drawn from comparative anatomy, and illustrated with outline drawings.

Dr. Campbell of Georgia read a report on the "nervous concomitants

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of febrile diseases;" which was accepted and referred to the committee of publication.

Dr. J. Marion Simms of New York city read an abstract of his report on the treatment and of the results of obstructed labor, illustrated with a series of magnified illustrations. The doctor seemed perfectly familiar with his subject, and was frequently applauded.

Dr. Stephenson of New York read an interesting abstract of his report on "the treatment best adapted to each variety of cataract, with the method of operation, place of selection, time, age, &c." Dr. Stephenson is the surgical director of the New York ophthalmic hospital, an institution which relieves hundreds every year from sufferings with diseases of the eye, besides enabling pupils to receive invaluable instructions.

On motion, other reports were called for, read by their titles, and referred to the committee of publication.

## *Committees for the ensuing year.*

Dr. Edwards, from the committee of nomination, offered the following list of committees for the ensuing year, which was accepted, and the committees were chosen:

*Special Committee on the Microscope*—Drs. Holsten of Ohio, Dalton of New York, Hutchinson of Indiana, Stout of California, and Ellis of Massachusetts.

*Special Committee on Medical Jurisprudence*—Drs. Smith of N. York, Hamilton of Buffalo, Crosby of New Hampshire, Purple of New York, and Mulford of New Jersey.

*Committee on Quarantine*—Drs. Harris of New York, Moriarty of Massachusetts, La Roche of Pennsylvania, Wragg of South Carolina, and Fenner of St. Louis.

*Committee on Surgical Pathology*—Dr. James R. Wood of New York, chairman.

*Committee on Diseases and Mortality of Boarding Schools*—Dr. C. P. Mallengly of Kentucky, chairman.

*Committee on the various Surgical Operations for the Relief of Defective Vision*—Dr. Montrose A. Pallen of St. Louis, chairman.

*Committee on Milk Sickness*—Dr. Edward A. Murphy of Indiana, chairman.

*Committee on Medical Ethics*—Drs. John Watson of N. York, Dalton of Massachusetts, Emerson of Pennsylvania, Hamilton of New York, and Gaillard of South Carolina.

## *Restoration of Dr. Bailey.*

Dr. Edwards also reported from the committee of nomination the following resolution:

Resolved, that a committee of nine be appointed by the chair to wait on the Hon. Howell Cobb, secretary of the treasury, and respectfully request the restoration of Dr. M. J. Bailey as inspector of drugs and medicines for the port of New York.



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Dr. Edwards, in an elaborate and eloquent argument, urged the adoption of this resolution. He considered the law regulating the inspection of drugs and medicines an important law. Its paternity could be clearly traced to the action of this association in Baltimore. He had urged its adoption at that time; he had taken it from there into congress, and he had received upwards of nine hundred letters, advising, instructing and aiding him. He had succeeded, and he felt that in so doing he had performed a great work. In obtaining the passage of the act, he had been seconded by Dr. Bailey, who had for years been an inspector of drugs, with a view of ascertaining their commercial value, for the custom-house, and had discovered that two-thirds of the drugs and medicines imported were adulterated—some of them grossly adulterated. After the passage of the act, Dr. Bailey was very properly appointed, and had given the most perfect satisfaction to the colleges of pharmacy, to practitioners, and to all concerned.

Yet after filling the office acceptably, Dr. Bailey had been removed. There was no paper on file against his qualifications, against his fitness, against his ability; but he had been appointed upon the recommendation of four New York gentlemen. To show the strength of this recommendation, he would name one of these gentlemen. Isaiah Rynders! [Laughter.] Such was the authority upon which Dr. Bailey was removed.

Now, he did not intend to quietly see a gentleman so eminently qualified as Dr. Bailey is, put one side upon such a recommendation, to give way to a man who is said to be unfit for the place. Doctors Fitch and Chaffee had prepared a bill repealing the law in congress, for it would be better to have no law than to have it thus administered. He would second them with all his might. The bill was the only public act with which his name was connected, and, feeling for it the love of a parent to a child, he would prefer seeing it abolished to seeing it misadministered.

Dr. Tyler of Georgetown rose to reply, but gave way to permit Dr. Condie to have some special committees on medical subjects appointed.

Dr. Palmer moved to adopt the appointment of these committees as recommended; which was carried.

Dr. Tyler said that there was no member of the medical profession in the country who felt more indebted than himself to Dr. Edwards for his agency in procuring the passage of the law for the inspection of drugs and medicines. [Applause.] It was unnecessary to say a word in regard to the benefit which has resulted from the passage of that law, nor did he wish to be misunderstood in his opposition to the resolution. But when it was proposed to appoint a committee to wait upon an executive officer of government, and dictate to him, he felt that it would be turning aside from the purposes for which this association was organized.

The gentleman who introduced the resolution had said that Dr. Bailey

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would not have turned from his laboratory to elect a president. He commended him for it. But he would not have this association leave its noble sphere of action to approve or to denounce an appointment avowedly made upon political grounds. [Applause.] If the association leaves the field for which it was organized, and in which it has steadily labored for eleven years, he felt confident that it would result in no good—it might result in injury. He had not anticipated this action. He had given the subject no consideration; but it struck him as directly in opposition to the prosperity and the popularity of the association, and he asked gentlemen to pause ere they voted for the resolution.

Dr. Bolton of Virginia urged the adoption of the resolution.

Dr. Cox of Maryland concurred with Dr. Tyler in acknowledging the value of the services of Dr. Edwards, and he also concurred with him in objecting to the political, personal and special character of the resolution which that gentleman had presented. The passage of such a resolution which open the door for unpleasant action hereafter. If a change was recommended at New York, one would be recommended at Boston, at Philadelphia, and at Charleston. That it would be well to disconnect these offices from politics, he would admit; and he would consequently offer the following resolution as a substitute for that of Dr. Edwards:

Resolved, that the appointment of inspectors of drugs and medicines in the various ports of the United States should, in the opinion of this association, have regard to the essential, moral and scientific qualifications of the candidates, and not to considerations of personal favoritism or political bias.

Dr. Edwards trusted that the substitute would not be received by the association. The present occupant of the post at New York was notoriously unqualified for it. He wondered that gentlemen should object to seeing him displaced to make room for the reinstation of a gentleman whose qualifications no one could question. Nor did he think that the secretary of the treasury would consider it an interference if the representatives of the medical profession of the whole country made a suggestion to him. Besides, Dr. Bailey is a democrat, and therefore the removal was not a political one. He had reason to believe that upon a proper suggestion, Dr. Bailey would be restored. If he was not restored, the law would be repealed before the close of the present session.

Dr. Tyler supported the substitute offered by Dr. Cox, as a fair compromise. He believed that the appointment of a committee would transform the association into a political machine. He honored the gentleman from Ohio for the evidences of a warm heart which he had exhibited in endeavoring to procure the restoration of a friend to office, but with him a great principle was at stake. Gentlemen who do not reside in this district may not understand how heads of departments are

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importuned about offices, and how jealously the motives of all who take part in the appointment or the removal of office holders are scanned. He should prefer to see the resolution of Dr. Cox passed.

Dr. Dunbar enquired if it was the duty of a committee of nomination to nominate a candidate for inspector general of drugs at New York. [Laughter.]

Dr. Batchelder of New York called for the reading of the original resolution presented by Dr. Edwards.

Dr. Parker of Virginia offered other resolutions as a substitute for those offered; which were lost.

The question was then taken on accepting the substitute offered by Dr. Cox; which was lost.

Dr. Wilcox of Connecticut offered an amendment to the resolution of Dr. Edwards, "disclaiming all political considerations." The amendment was accepted by Dr. Edwards.

Dr. Batchelder testified to the qualifications of Dr. Bailey, whom he had known from his pupilage.

Dr. Jewell of Philadelphia hoped that the resolution would not pass. If it did, he would ask to have a gentleman at Philadelphia removed. Boston members will do the same, and this association will be wholly occupied with offices.

Dr. Wood of New York said that he rose from a sense of duty, and frankly confessed that he should vote contrary to his personal predilections, which were in favor of Dr. Bailey. [Applause.] But an endorsement of him would be a bad precedent. If we are to make ourselves judges of any individual, we must make ourselves judges of all individuals. If we sit in judgment on the gentleman now holding this office, we shall gradually sink into political partisanship, and lose our present high position. He could not consent to sanction the public action of the association, although if a petition was drawn up for the reinstatement of Dr. Bailey he would be pleased to see it signed by every member present in his individual capacity.

Dr. Rodgers of New York said that the subject had not been brought before the association at the recommendation of the delegation from New York, and he moved that it be laid on the table.

The previous question was called and sustained. The motion to lay on the table was defeated—Ayes 49, noes 64.

Dr. Sayer of New York eulogized Dr. Bailey as eminently fitted for the place, and condemned the present incumbent.

The resolution as amended was then carried by a vote of 79 ayes to 52 noes.

Resolved, that a committee of nine be appointed by the chair to wait on the Hon. Howell Cobb, secretary of the treasury, and respectfully to request the restoration of Dr. M. J. Bailey as inspector of drugs and

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medicines for the port of New York—at the same time disclaiming all political considerations.

Dr. Bohrer of Georgetown, chairman of the committee on special medical essays, stated that they had not had time to read, much less consider, the papers placed in their hands.

On motion, the committee on special medical essays was instructed to hand such papers as they deemed worthy, to the committee on publication.

The president announced, as a special committee to wait on the secretary of the treasury, Drs. Arnold of Georgia, Atkins of Virginia, Buckley of New York, Hayes of Pennsylvania, Smith of New Jersey, McPheeters of Missouri, Hargraves of Alabama, Ritcher of Michigan, and Hooker of New York.

On motion, Dr. Edwards was added to the committee as chairman. He declined, giving personal reasons as an excuse; but the committee refused to accept it, and he was accordingly chosen.

A gentleman stated that he, with several friends, had voted for the resolution with the sole intention of moving its reconsideration.

Dr. Grant of New Jersey presented a complaint made by the Newark medical society against the Medical institute of New York, for a violation of the ethics of the profession. Dr. Edwards presented a similar complaint, and Dr. Oakley, a complaint from the Union and Essex county medical societies. They were received and referred.

Dr. Sutton of Kentucky moved that Dr. Jarvis of Massachusetts have further time to report on a uniform system of registration of births, marriages and deaths, and that a committee be appointed to urge upon the census bureau of 1860 the importance of having a physician attached to it to collect vital statistics.

Dr. Kyle of Ohio proposed an amendment to the constitution, by which no person can sit as a member or a delegate at meetings of this association, who is not a graduate of a recognized medical college. Laid over for one year, under the rules.

Dr. L. A. Smith presented resolutions of the New Jersey medical society, praying for such changes of the constitution as would establish a board of census in every judicial circuit of the supreme court, who should examine and grant diplomas to all proper members of this association. Laid over for one year, under the rules.

Dr. Humphries of Indiana presented a resolution praying for an interchange of transactions of state and county societies; which was adopted.

Dr. Boyle, chairman of the committee of arrangements, presented the names of Prof. Swallow of Missouri, and Prof. Mittag, as "members by invitation," and they were elected.

An invitation from Prof. Bache to visit the coast survey bureaux, on Capitol hill, was read, accepted, and a vote of thanks for the courtesy was passed.

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Dr. Gibbs of South Carolina moved that Professor Henry be requested to favor the association with his views on meteorology, at such time during the session as he may select.

Carried unanimously.

Dr. Campbell of Georgia moved that the secretary place on record an expression of the regret with which the society has learned the death of Drs. C. R. Walton, S. W. Granton, Marshall Hall, T. Y. Simmons, Mitchell, and other members deceased since the last annual session. Carried.

## *Vote of Thanks.*

On motion of Dr. Phelps, the following resolutions were passed unanimously, the members rising:

Resolved, that the thanks of this association are eminently due to the regents and Prof. Henry of the Smithsonian institution, for the ample and convenient accommodation afforded for the transaction of business.

Resolved, that the committee of arrangements are entitled to our praise and highest appreciation of their exertions to promote the comfort of the members and the best interests of the association.

Resolved, that to the physicians of Washington and Georgetown and the faculty of Georgetown college we accord the homage of our sincerest thanks for their elegant hospitalities extended to the members from abroad, by which the pleasure of their sojourn here has been so greatly enhanced.

Resolved, that we feel assured that the impressions on the tablet of memory received here, in our national metropolis, in this the first year of the second decade of the association, will long remain an evidence of the urbane attentions received not only from the chief magistrate and other public functionaries of our glorious Union, but of private citizens and the community at large.

Resolved, that the manifestations of union of heart and purpose in the action of this session inaugurate a new era, and call for devout acknowledgment of Divine Providence, and presage, as we trust, not only a bright future for the association, but also as contributing to the perpetuity and prosperity of our great national confederation.

On motion of Dr. Anderson of New Jersey, it was unanimously resolved that the thanks of the medical association be presented to Rev. Dr. McGuire and his faculty of the College of Georgetown, for their very cordial reception and entertainment of the association at the college yesterday.

Dr. Arnold of Georgia then exhibited specimens of a new method of medical preparation of some membrane incomprehensible to the reporter, but which was evidently very interesting to the association.

On motion of Dr. Foster of Tennessee, it was resolved that after 1860 Dr. Hamilton have the privilege of using his report on "deformities after fracture," published in the Transactions, for a work which he proposes to publish.

Dr. Duhamel of Washington moved that a committee be appointed to investigate and report upon the "national hotel disease."

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Dr. Foster of Tennessee opposed the appointment of such a committee, as did Dr. Boyle of Washington. Dr. Duhamel withdrew his motion.

Dr. Gaston of South Carolina exhibited a new instrument of a novel construction.

Dr. Campbell of Georgia was not aware, until he had just heard permission granted to Dr. Hamilton, that he had transgressed in republishing in a work a report which he had contributed to the Transactions of the association. [Cries of "Regret it," "regret it."] He did regret it, and asked the sanction of the society; which was granted.

The president appointed Drs. Miller, Antisel, and Garnet a committee to wait on the census bureau, as provided by the resolution of Dr. Sutton.

Dr. Dunbar moved a reconsideration of the vote appointing a committee to request the reinstation of Dr. Bailey, and Dr. Morgan seconded it, but, as Dr. Parker had been invited upon the platform, the motion was ruled out of order.

## *Dr. Parker's Chinese Hospital.*

Dr. Peter Parker, ex-commissioner to China, was then introduced, and was received with applause. He exhibited some curious specimens of calculi, as the results of thirty-eight operations upon Chinese. They were of various shapes and composition, and weighed from a few drachms up to three, seven and eight ounces. His description of the operation by which these calculi were removed was deeply interesting, and it was gratifying to learn that out of the thirty-eight patients, all but five or six recovered perfect health.

Dr. Parker proceeded to state that he has treated in China, at the hospital under his charge, fifty-three thousand cases. Pictures of the most curious cases he had brought to this country, and they were on exhibition in the room below. At no very distant period he hopes to place in a permanent form the result of his labors, with illustrations. [Applause.] Among other cases, he had probably performed upwards of a thousand operations for cataract. On one day he operated in sixteen cases, the youngest being a mere child, and the oldest an old lady seventy-nine years of age. She came, led by a servant, submitted heroically to operations on both eyes the same day, and in a fortnight had her sight perfectly restored. [Applause.] In acknowledging a vote of thanks, Dr. Parker said he had among his patients all classes, from members of the imperial family down to beggars. His greatest difficulty had been to persuade his patients that he could not cure all diseases.

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## *Reconsideration of the Dr. Bailey Resolution.*

Dr. Dunbar claimed the floor, and urged the reconsideration of the vote appointing a committee to wait on the secretary of the treasury, and solicit the reinstation of Dr. Bailey.

Dr. Payne of Virginia opposed the reconsideration.

Dr. Tyler advocated it, and asked if this association was formed to wait on executive officers, and to dictate to them who they shall remove, and who they shall appoint. Many gentlemen around him, he was assured, had voted for the resolution without due reflection, and he trusted with confidence in their sober second thought. [Applause.] The press and the profession, he felt confident, would denounce this association if it entered into the wide field of politics. It was instituted to promote the great cause of science, not to join issue with government. [Applause.]

Dr. Morgan also advocated a reconsideration. He was not a partisan. Although he resides in Washington, he has no personal acquaintance with the president or the secretary of the treasury, but he was confident that they would not have made the change without good reason, and it was not the mission of this association to criticise or to attempt to change their views.

Dr. Palmer, after stating how little regard he had for the opinions of the press, enquired as to the present incumbent of the office. Is he capable?

Dr. Watson of New York said that Dr. Bailey had had his circulars out since his "rotation," and the subject had been twice before the academy of medicine, who have ignored it.

Dr. Burns of Brooklyn said that he was not a politician, and that he was a personal friend of Dr. Bailey, but he hoped that the vote would be reconsidered.

A member from California related his experience there on a question as to the superintendent of a lunatic asylum. In his opinion the less the association had to do with politics, or with expressions of opinion on political appointments, the better. [Applause.]

Dr. McNulty of New York said that the question had been twice before the New York academy of medicine, and twice been voted down. The present incumbent, whom it is sought to oust, is a German by birth and education. He can read the invoices in whatever European language they may be sent, and he makes his own analyses, which it is reported the ex-inspector did not do.

After some "parliamentary" skirmishing, it was decided to reconsider by a vote of 51 ayes to 32 noes. And, on motion, the subject was then indefinitely postponed.

The association then took a recess of two hours, for dinner.

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## EVENING AND CLOSING SESSION.

The association was called to order at 5 o'clock P. M. by Dr. Sutton, one of the vice-presidents, who took the chair.

The amendments to the constitution, proposed at the annual meeting at Nashville, had been made the "special order." They were—

1st. Amend the third article of the constitution, in relation to meetings, by inserting after the words "first Tuesday in May," the words "or the first Tuesday in June;" and also inserting after the words "shall be determined," the words "with the time of meeting."

2d. In article 2, omit the words "medical colleges," and also the words "the faculty of every regularly constituted medical college, or chartered school of medicine, shall have the privilege of sending two delegates."

Each amendment was separately discussed, and each was lost by a large vote. An amendment proposed at Philadelphia in 1856, providing for the establishment of a permanent secretaryship, was lost by a vote of 53 ayes to 84 noes.

On motion of Dr. Foster of Tennessee, the secretary was directed to collect all the by-laws, and have them printed in the next volume.

An attempt was made to introduce a motion endorsing the accoustics and ventilation of the new capitol extensions, but it was ridiculed by Dr. Sayer, and was withdrawn.

Various additional votes of thanks were passed, and, at ten minutes of seven, the association adjourned sine die.

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## *Excursion.*

The members and delegates of the National medical association were entertained on Thursday evening, May 6, at the residences of Hon. Stephen A. Douglas, corner of New Jersey avenue and I street, Dr. Cornelius Boyle, 27 Four and a half street, and Dr. J. F. May, 397 C street.

On Friday, May 7, there was an excursion on the steam boat Thomas Collyer to Mount Vernon, Fort Washington and the Pavilion, where a planked shad entertainment was given to the association by the medical profession of the district.



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# EDITORIAL.

## *American Medical Association.*

THE publication of the Journal for the present month has been intentionally delayed, so as to give our readers an early report of the Transactions of the Association during its meeting in Washington.

We are now enabled to present a full and accurate synopsis of the deliberations of that body, compiled from the excellent reports as published in the Union, to the reporters of which paper we owe our thanks.

It was the privilege of the senior editor of this journal to be a participant in the deliberations as well as the festivities of the occasion; and did space permit, many interesting topics might be introduced to the reader's notice which are but slightly touched on in our history of the proceedings. Suffice it for the present to say, that at no previous session has the association exhibited its dignity and its *power* more forcibly and with better effect than at the present time. More than five hundred delegates, representing, we believe, every state in the Union, filled the spacious lecture room of the Smithsonian institute. Amongst the members present were found a large proportion of the most eminent men of the profession. The leading professors of our best schools, the most prominent surgeons and physicians of our great hospitals, and the most distinguished of our medical authors, were here, commingled with the experienced general practitioner and the ready witted and hard working country doctor.

Whilst we are glad to record the many valuable results collected by the various committees who have been more than usually diligent during the past year, we are still more disposed to admire the harmonious and social intercourse which such occasions foster, as having an admirable effect on the profession; and although some events occurred at the present meeting which produced much excitement, and were of an unpleasant nature, yet the *moral power* of the associated profession was never more distinctly displayed, or more triumphantly carried into effect; and the severe rebukes which were administered to those who dared flagrantly to violate the honor of our calling, will undoubtedly have a wholesome effect.

We cannot forget to allude in the warmest language to the graceful and indeed universal hospitality which was showered on the association by the inhabitants of Washington, and more especially by the medical men of that city—while the many objects of interest which surrounded the visitor on every hand, added additional attractions to the occasion.

A pilgrimage to Mount Vernon appropriately occupied the last day of the session—and a long line of visitors, collected from all quarters of our confederacy, reverently wound their way through the wild and neglected paths which lead to the *Tomb of Washington*, wandered through those ancient halls, and looked upon the memorials of the immortal dead.

A merry pic-nic on the banks of the Potomac closed the scene, and the eleventh meeting of the association was brought to a brilliant and successful termination.

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VIRGINIA

MEDICAL JOURNAL.

JUNE 1858.

ART. I.—*Two Cases of Compound Comminuted Fracture of both Bones of the Leg, for which Amputation was performed in consequence of Secondary Hemorrhage from Ulceration of the Arteries. Specimens presented to the New York Pathological Society by* DR. HUTCHISON *of Brooklyn City Hospital.* Reported by FRANK D. CUNNINGHAM, M. D. Resident Surgeon, Brooklyn.

CASE I.—Wm. ——, æt. 34, intemperate, was admitted into the City hospital, Brooklyn, June 28, 1857, with compound comminuted fracture of the tibia and compound fracture of the fibula, about two inches above the ankle joint, produced by the passage of the wheels of a fire engine over the leg whilst lying on a city rail road track. There was considerable laceration of the soft parts over the seat of fracture, and a piece of the tibia was found projecting through the external wound. There was also considerable hemorrhage from the wound, which continued for several hours, but was finally arrested by compresses. The leg was put in a fracture box, and on the next day a consultation of the surgeons of the hospital was held, when it was decided to make an effort to save the limb, the projecting piece of bone having been removed.

July 3.—Erysipelatous blush extending from the wound to the knee; patient restless, and the leg very painful.

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Ordered Dover's powder, *pro re nata*, and lotion of acetate of lead to the leg.

July 5.—Erysipelas disappeared. Profuse discharge of pus from the wound, with considerable sloughing of the contused tissue; anorexia; pulse 104; restless. Ordered brandy and generous diet; yeast and charcoal poultices to the leg.

July 30.—A number of fragments of the tibia, from a half to two inches in length, have been removed since last record; suppuration has been very profuse, with loss of appetite and great prostration; discharge now much diminished, and general condition improved.

Aug. 28.—There is some firmness at the seat of fracture; very little discharge from the wound, which is slowly healing, and is covered with healthy granulations; general condition good.

Sept. 19.—When a probe is introduced into the wound, roughened bone can be detected. A tent of compressed sponge was introduced for the purpose of enlarging the opening so as to allow the dead bone to be removed.

Sept. 28.—Small fragments of bone removed on the 26th; now has some febrile symptoms, and the soft parts around the wound are breaking away.

Oct. 14.—Sloughing condition of the soft parts continues. New bony matter appears to be softened; anorexia and diarrhœa, with considerable prostration; leg removed from fracture box, and put up in boot splints, with appropriate dressings. Ordered an astringent mixture, brandy abundantly, generous diet, beef tea, &c.

Oct. 23.—Diarrhœa diminished; appetite improved; tendons of the tibialis anticus and extensor communis exposed, and sloughing.

Nov. 3.—Per saltum hemorrhage occurred from the region of the ant. tibial artery, which was arrested by tourniquet; amputation was proposed, but the patient positively declined.

Nov. 5.—Hemorrhage returned; amputation again proposed as a last resource. The patient being now willing,

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he was placed under the influence of ether, and Dr. Hutchison removed the limb, by a circular operation, at the usual place below the tubercle of the tibia. The usual precautions having been taken, a very small quantity of blood was lost during the operation. Under the use of 14 ounces of brandy per diem, beef tea, &c. his general condition began to improve from the day the leg was removed. The wound healed partly by the first intention and partly by granulation; ligatures came away in due time, and at the end of four weeks the wound had healed, and he was able to leave the house.

On dissecting the leg after amputation, the ant. tibial artery, at a point in the midst of the sloughing tissue, where it passed over a slightly elevated bridge of new bone uniting the upper fragment of the tibia with the corresponding fragment of the fibula, was found opened by ulceration on its ant. surface, and from this opening the hemorrhage had occurred. The ends of the fractured fibula were lapped for about an inch, and firmly united. The fragments of the tibia were separated about the distance of one inch, and their extremities were covered with the cartilaginous substance which usually envelopes the ends of bones in old cases of ununited fracture.

A point of interest connected with the foregoing case was, that it was proposed in the consultation to make further effort to save the limb, by cutting down on the bleeding vessel and securing it. This was overruled, however, by the circumstance that the operation might involve the loss of an amount of blood which would be fatal in the present debilitated condition of the patient, and that by cutting off the supply of blood to the already sloughing tissue, gangrene would likely ensue. The examination showed the propriety of the amputation, for it would have been impossible to have procured bony union of the tibia without resection of its extremities, which would also have involved resection of the fibula, even if the ligation of the bleeding vessel had not been followed by the consequences which were apprehended.

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*Compound Comminuted Fracture of Leg, complicated with dislocation outwards of the Foot. Secondary Amputation in consequence of Hemorrhage from Ulceration of Muscular Branches of the Anterior Tibial Artery.*

Case II.—John ——, æt. 31, of temperate habits, and apparently fine constitution, admitted November 20th, 1857. Whilst at sea, 36 hours before admission into the hospital, he had his right leg caught in a turn of the foresheet of a large schooner, and jammed against a stanchion, an upright piece of square timber. He was held in this position until the vessel was brought up to the wind, when the sheet slacked, and his leg was released. At the time he was released the patient was in a state of syncope, but soon rallied, and at the time of admission, reaction was fairly established, pulse being 80, and normal in character. The amount of swelling was considerable, but it was ascertained that both bones were fractured near their lower extremities; the fracture of the tibia passing through the internal malleolus and separating it. The wound in the integument was situated over the lower third of the tibia, rather to the outside of the median line of the leg, being nearly circular, and about two inches in diameter. A small fragment of the fibula, which protruded through the wound, was removed. The foot was dislocated outwards. As he was of fine constitution and temperate habits, it was decided to wait until the amount of injury to the soft parts should be clearly defined, when the question of secondary amputation would be considered. The leg was accordingly placed in a fracture box, evaporating lotion applied, and anodynes ordered *pro re nata.*

Nov. 22.—Leg very painful; slight discharge from the wound, near which are several large bullæ, supposed to be the result of friction by the rope at the time of injury. Poultices to the part; enemata and anodynes.

Nov. 26.—Erysipelatous blush observed around the wound; whilst dressing the wound, had slight per saltum hemorrhage

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from a small vessel below the external malleolus, which was soon arrested by cold; suppuration profuse; leg put on double inclined plane, and free stimulation internally.

Dec. 4.—Whilst the nurse, who had been watching him attentively during the night, was absent a short time preparing for breakfast, hemorrhage took place from a sloughing surface over the middle third of the leg, owing, as was supposed, to opening of some of the muscular branches of the ant. tibial artery. About twenty-five ounces of blood were lost before the hemorrhage was arrested by pressure over the femoral artery. I applied a tourniquet loosely over the femoral, to be tightened if necessary, but the hemorrhage did not recur. Patient much prostrated; pulse 140, and leg exceedingly painful, as it had been for several days; pulsation in the dorsalis pedis artery distinctly felt. Ordered brandy, f. ℥i every hour. Consultation held at 2½ P. M., and Dr. Hutchison, with the concurrence of his colleagues in the surgical staff, performed circular amputation of the leg at the usual point below the tubercle of the tibia. The patient was completely under the influence of the anæsthetic usually administered in this hospital—a mixture composed of one part chloroform to three parts of ether, and the circulation was so thoroughly controlled that less than one ounce of blood was lost during the operation. The influence of the anæsthetic soon subsided; pulse exceedingly feeble; skin cold, and covered with profuse perspiration; and this condition continued, with great restlessness, during the night. Consciousness did not return until the next morning, when he first became aware that his leg had been removed. I saw him frequently during the night; had brandy given *ad libitum*, and the hot air bath freely applied to the entire surface.

Dec. 5.—Skin hot and dry; pulse 116 and feeble; very restless. Ordered gtts. xxv of saturated solution of camphor p. r. n.; milk punch and quinine.

Dec. 12.—On the 8th several of the ligatures came away. No force was used in their removal, and it was followed by

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no immediate hemorrhage, but after the lapse of 4 or 5 hours, about six ounces of blood were lost from the stump; which produced great prostration; and on the 9th, one ounce was lost. At 3½ P. M. yesterday had a marked chill, which was arrested by the hot air bath, and he had a comfortable night. His aspect, appetite, tongue and pulse, notwithstanding the hemorrhages and chill, have improved since the last record. There is a profuse discharge of healthy pus from the wound, and the granulations look well.

Dec. 14.—Chill last evening at 9½ P. M. followed by profuse perspiration; chill to-day at 4½; at 8½ A. M. and at 3 P. M. pulse 140; cannot retain milk punch; discharge from stump diminished.

Dec. 17.—Complained yesterday of pain over region of the liver, with vomiting; relieved by sinapisms; pain and constriction across the chest, and viscid mucous expectoration; no physical signs of disease of the lungs; liver somewhat enlarged; stump looks well; chill at 7 P. M.

Dec. 18.—Pneumonic expectoration, with dullness on percussion over the right lung; pain in left arm and shoulder; no signs of abscess about the part.

Dec. 19.—At 4½ P. M. after sitting up to eat an egg, hemorrhage to the amount of two ounces occurred from the stump, and was arrested as before by cold water dressing. Death took place at 2½ P. M. the next day.

*Dissection of the leg after its removal.*—The arteries of the leg were first injected, the injection passing out of the muscular branches of the ant. and post. tibial arteries, which were situated in the midst of the sloughing tissues. The main trunks of these arteries, as well as that of the peroneal, were dissected out, but no openings could be detected in them. The anterior ligament of the ankle joint had been lacerated at the time of injury, and was now in a sloughing condition. The soft parts, as high as the point of amputation, were inflamed, sloughing, and with sinuses burrowing here and there. The internal malleolus was fractured through its base, and the fibula was fractured about

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three-quarters of an inch above its articulation, with the astragalus. The fracture of the fibula was comminuted, and when the pieces were removed, a distance of three-quarters of an inch between the ends of the fractured bone was left.

*Autopsy.*—On dissecting the stump, the soft parts were found in a sloughing condition. The extremities of the ant. and post. tibial arteries were ragged, and in a sloughing state. They contained a soft clot, which offered little or no obstruction to a straw passed through them from above downwards. This condition explains the repeated hemorrhages from the stump. The extremities of the veins were filled with a clot which extended upwards a distance of 2½ inches, and from this point to Poupart's ligament the popliteal and femoral veins were filled with pus. Several circumscribed abscesses were found in the right lung and liver. The kidneys and heart had undergone fatty degeneration.

The particular points of interest in the foregoing case are—1st. The loss of 25 ounces of blood on 16th day after injury, from the muscular branches of the ant. tibial artery, which had been opened by the sloughing process, rendering amputation necessary the same day. 2d. Hemorrhage from stump to the amount of six ounces on the 4th, and one ounce on the 5th day after amputation, owing no doubt to the condition of the arteries above mentioned. 3d. Chill on the 8th, and several on the 10th day after amputation, followed by pain over the region of the liver, and pneumonic symptoms, indicative of pyemia, which caused death 16 days after the operation. Another feature of interest, and one which we had no reason to suspect from the aspect of the patient, was the fatty degeneration of the heart and kidneys, which would have rendered his recovery from so grave an injury doubtful, even had not pyemia and the other unfavorable conditions supervened.

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ART. II.—*Review of Robinson's Analysis of Wood's Case of Labor.* By W. L. WOOD, M. D., Hanover county, Va.

THE case of labor reported in the November number of the Journal, by myself, has, to my very great satisfaction, elicited the opinion of several of the members of the profession, in regard to its proper diagnosis. Some, from whom I have heard by private communication, contend that the patient died of "concealed uterine hemorrhage," and others, that she died of "endocarditis, with fibrinous exudation." I discover, in the January number of the Journal, an article by Dr. H. C. Robinson of North Carolina, in which death is traced to "polypus, or fibrinous concretion in the heart." With regard to this latter view, I beg leave to submit a few remarks.

Dr. Robinson's reasons for arriving at the conclusion he does, are plausible, and suggestive of very important physiological, pathological and therapeutic considerations. In enumerating the causes which produce coagulation of the blood, he mentions the loss of a portion of the circulating fluid, syncope, an altered quality of the blood, and hyperæmia.

Now, if it be true that these causes do produce coagulation, then the doctor is correct in his diagnosis, in all probability; for each of these causes existed in the case under consideration. But does a loss of a portion of the circulating fluid increase the tendency of the remaining blood, per se, to coagulate? I apprehend not. Because to increase the coagulability of the blood requires either a relative or absolute increase of its coagulating properties, an effect which hemorrhage does not produce primarily. If syncope were a *coagulator*, it would follow, a priori, that the erect or semi-erect posture should be maintained in all cases of hemorrhage, instead of the recumbent, which the doctor so much insists upon, particularly in cases of uterine hemorrhage; because it is one of the powerful means of which nature

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avails herself to "occlude bleeding orifices." The hemostatic influence which syncope and a loss of blood produce is due not to a more coagulable condition of the blood, but clearly to a diminution of the force of the current, as the effect of the powerful sedation which these agents produce, thereby enabling the bleeding orifices, by virtue of their tonicity or contractility, to overcome the mechanical impediment to their closure. That this is the true explanation, is manifest from the fact that they may be made to bleed again by the exhibition of any agent which will increase the force of the current. As a cause of coagulation, the doctor states, that "in the latter stages of pregnancy, and for a while after parturition, the relative proportion of fibrine in the blood is materially increased, and a condition of hyperæmia exists."

On this point, he quotes Messrs. Jones and Sieveking to show that anæmic blood has a strong tendency to coagulate, particularly "when propelled by a languid heart." It is true that in anæmia the fibrin is not diminished in the proportion of the other animal contents, and that anæmic blood has a stronger tendency to coagulate than healthy blood; which is due, no doubt, as Andral surmises, to a predominance of fibrin over the red particles. In addition to this, it is also true that anæmic blood is thinner than healthy or hyperæmic blood, and that a certain spissitude in the blood is favorable to its transit through the hydraulic apparatus of the circulation. Majendie found that animals from whose blood fibrin has been abstracted, were affected with congestions and effusions in the lungs and other organs, which he ascribes to a cause supposed by M. Poisseuille to be a general physical fact; i. e. that very thin fluids pass with greater difficulty through the capillary tubes than those of somewhat greater spissitude—a fact which militates very much against the doctrine that "the condition of hyperæmia which exists during pregnancy, increases the tendency of the blood to coagulate."

Does hyperæmia signify "a material increase of the rela-



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tive proportion of fibrin in the blood?" Hyperæmia comprehends an excess of red particles as well as fibrin—hence its tendency to coagulate is not so great as anæmic blood, whose strong tendency to coagulate is due, according to Andral, to a predominance of fibrin. It will now be discovered, that if hyperæmia contributed to fibrinous concretions, and that a loss of a portion of the circulating fluid renders that which remains more coagulable, then, the profession would be deprived of their sheet anchor in the treatment of the morbid results of plethora, and the time honored practice of phlebotomy, with a view of overcoming the ruinous tendency to hyperæmia in pregnant women, would have to be discarded as gross malpraxis.

I come now to enquire, what is the cause of coagulation? It is clear to my mind, that this cause must be either in the vessels or in the blood, or in both. The latter no doubt is the true case. "Atony or flaccidity of blood vessels becomes a cause of impediment to a current through them, by removing that tone by which the vessels maintain the calibre and the tension best calculated to transmit onwards the force of the current." Therefore, vessels, weak and inelastic, favor the coagulation of the blood, by its tardy motion. And it is very certain that the other cause of coagulation depends on the changes which take place in the blood in the blood vessels, which consists in a relative increase of its coagulating properties—as the increased production of white globules in inflammation, the relative increase of fibrin in anæmia, &c.

Here I would state that there is no better attested fact than this: When the mass of the blood is reduced in quantity, the blood vessels contract in proportion, their tonicity adapting them to the amount of their contents, the vessels of the skull constituting the only exception, being fixed in bony canals, and exempt from atmospheric pressure; they therefore retain more than their proper share of the circulating fluid; the heart's action being feeble, is inadequate to propel the current, it therefore coagulates. (G. Budd, Cruveilhier, Andral.)

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In conclusion, I would remark that the doctrine of "heart clot," as an idiopathic affection, is involved in much doubt, and will ever be so, until its existence, as such, shall have been demonstrated by actual experiment upon *living animals;* for I am at an utter loss to conceive in what way post-mortem investigations can throw any light upon the subject. At the present stage of the science, I must, with all just deference, regard the dying energies of the heart and the occurrence of fibrinous concretions, called polypi, within it, found after death, in the relation of cause and effect.

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ART. III.—*Curious Effect of Chloroform, occurring in the Practice of* Dr. HUNTER H. MCGUIRE, *Professor of Anatomy in the Winchester Medical College.* Reported by CHAS. MCCORMICK, M. D.

MULATTO BOY, James Barber, aged 20, came to the office on the 20th of September last, laboring under necrosis of the femur. After an examination, it was thought advisable to cut down, expose the bone, and remove the sequestra. The next day the boy was put upon the operating table, chloroform was administered upon a napkin, and the usual precautions of admitting a sufficiency of atmospheric air along with the vapor, having his clothes loose, &c. were carefully observed. During its administration the patient attempted to avoid the vapor, not as is generally the case, by jerking the head away once or twice, and then, after one or two inspirations, quietly yielding to its effects, but by first turning his head, and then, when the administrator quickly followed the movement with the chloroform, though holding it some distance from his nose, he attempted to turn his whole body—in fact, exerted such muscular force as to require several assistants to keep him in the proper position. After several inspirations he became quiet, and remained so until the stage of muscular excitement came on. This was both violent

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and protracted. The patient exerted his full muscular force; and it was with no little difficulty that the assistants could control the limbs and trunk, while a large addition of the chloroform was rapidly made to the contents of the napkin, and after a little time, anæsthesia was perfected.

I do not wish to be understood as having described any thing, up to this point of the case, as unnatural, although the muscular stage was violent, and of long duration; still we know that in a somewhat modified form, it is only what frequently occurs—a physiological effect of the agent, not objectionable, because we know that such movements are the sure prelude to the deep stupor that we desire. The amount of muscular rigidity displayed, however, setting aside constitutional idiosyncrasies, is I believe the best test of the purity of the agent. The more pure the anæsthetic, the less muscular excitement both as to intensity and duration.

The operation was then proceeded with; the bone exposed; the sequestra carefully removed; the hemorrhage, which was slight, arrested; the cut edges approximated—in fact, so long did he continue under its influence, that the wound was fully dressed before he emerged from his state of insensibility. When this occurred, the boy, as patients usually do, made some enquiries in regard to the case, giving evidence of entire return of sensibility—asking whether the operation had been performed, &c.; for though thought and voluntary motion are the first (so to speak) to throw off the effects of chloroform, sensation, as well as being the first to succumb, is at the same time the last to come from under its influence. While talking, I observed his speech was interrupted by a sort of hiccup—a simple spasm of the diaphragm. In about a minute more, this was repeated, more marked in its character than the first. Again it occurred, still more violent and protracted, involving not only the diaphragm, but some of the thoracic and abdominal muscles; and so they continued, with much shorter intervals, of longer duration and increased violence, until all the muscles of the trunk, neck, arms and thighs seemed to be,

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during a paroxysm, in a state of muscular rigidity—two or three more, judging from the progress of the others, and we should have had every muscle in his body involved. His pulse was slow, weak and intermitting, the pupil enormously dilated, and during a paroxysm his face had a livid hue. About forty drops of aqua ammonia, in a half tumbler of water, was with great difficulty administered, half of it being gotten down him during one intermission; the rest during a second. After the whole had been taken, another fit came on, equal in severity to the last. Again, with an intermission of about two minutes, a second occurred, scarcely greater in intensity than the first; and after this, the boy, though weak, did very well, and ultimately recovered entirely.

It was thought that this curious effect depended rather upon some peculiarity of the patient than any impurity of the anæsthetic; but such was not the case, for the same evening, wishing to introduce a catheter in an Irishman, laboring under recto-vesical fistula, who positively refused to allow its being done without chloroform, some from the same bottle was given, though great care was observed in its administration. He too at first resisted its administration, in the same unusual manner of the boy; and the commencement of the "muscular stage" was very violent. The agent was then withdrawn, and a fresh bottle procured, which last was given without one inconvenient or untoward symptom—the patient in fact passing off into a quiet sleep, scarcely exhibiting any muscular rigidity.

The next day the same chloroform was given by the elder Dr. McGuire, who being absent, had heard nothing of its curious effects in the hands of his son. He too was obliged to desist from its administration, owing to the same unnatural effects.

As a private student of Dr. McGuire, I have seen several times curious effects produced by the administration of chloroform, but never have seen or heard of any thing like the one I have just reported. In three or four cases I have seen

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the patient apparently regain every faculty of his mind, after the administration of the anæsthetic, and in about a minute pass suddenly back into a state of deep stupor; and in one case that I can now particularly recall, this curious transition from one stage to another occurred three several times. Another case of an old drunkard—a class of patients, by the bye, with whom chloroform is more apt to disagree than any others—in whom the stage of muscular excitement had been unusually severe and protracted, came very near dying, I believe, from asphyxia. And another, still more curious—the last that I shall mention—who was undergoing an operation for excision of the elbow joint, and to whom a very large amount of chloroform had been given, without producing any apparent effect. The operator thinking that he had at last met with one case which was proof against its effects, proceeded with the operation, the patient remarking, during the different stages, "You are cutting now"—"now you are chiseling," &c.—until at last, with a yell, he scattered operator and assistants into different parts of the room, and screamed for more chloroform. Up to that point the patient had felt nothing of the operation, though he knew, and afterwards recollected every particular concerning it.

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ART. IV.—*Obstetrical Cases. Retained Placenta and Uterine Tumor.* By CHAS. R. CULLEN, M. D., Hanover County, Virginia.

IT may not be uninteresting to readers of the Journal to mention the occurrence of retained placenta in the same person at three successive labors, two of which were attended by Dr. Henry Curtis of this county, who refers to them in the following words:

"In the first case to which my attention was called, the placenta being separated, was retained by transverse con-

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traction of the uterine neck (not of the os)—hour-glass contraction. In the last (Dec. 26th, 1855), there was partial separation, with firm adhesion, accompanied with alarming hemorrhage. It required the introduction of the hand into the uterine cavity and steady manipulation to separate the attached surfaces."

In the last labor (the 8th of May 1858), there was hour-glass contraction, with partial adhesion of the placenta, which required manipulation to remove. The hemorrhage following, though large, was speedily checked by the injection of cold water into the womb.

An unusually complicated case of labor occurred in April in this neighborhood, in a negro woman in her ninth labor. Was called to the case 20 hours after discharge of liquor amnii. Found hand presentation, followed by protrusion of whole arm. Dr. Curtis was called in consultation. The os uteri being rigid, introduction of the hand to turn was impossible. By combination of warm bath, tartar emetic and opiates, dilatation of the os resulted, succeeded by turning and delivery of a very large child, evidently dead some days. On the removal of placenta, found the existence of a large tumor, in size about three by four inches, hard at upper and soft and lacerated at lower part, and attached by a large surface to the fundus of the womb. Slow hemorrhage continued six days, terminating in the woman's death.

From a history of the woman's previous labors, I ascertained that two years since, her eighth labor (in 1856) was protracted by foot presentation; that the seventh labor, twelve months preceding (in 1855), was difficult, but the others speedy and without medical intervention. It appears from this that the tumor that destroyed this woman's life had been growing over three years, changing the form of presentations, and nothing of the kind was ever suspected till the completion of her last labor.

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# TRANSLATIONS AND SELECTIONS.

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I. *On the Treatment of Nervous Headache—Gulstonian Lectures, delivered before the Royal College of Physicians.* By JOHN ADDINGTON SYMONDS, M. D.

I HASTEN now to the consideration of the treatment of nervous headache, that kind of which I have adopted the popular appellation, and which I have described as consisting of a painful affection of the nerves of the brain. And first, as to the removal or alleviation of the immediate attack. It is rare for us to succeed in cutting short an attack, that is, stopping it in mid career, or at the very onset; but we are not without means of greatly abating its violence.

The case is one for a skillful use of anodynes; and I know of no form of pain which offers wider scope for the exercise of ingenuity in the combination of these remedies, and in the mode of administering them, as well as of patience in varying them, till the form and dose have been ascertained which suit the individuality of the case. I need not say that nothing marks the sagacious physician more surely than his faculty of quickly discerning the speciality of the patient submitted to him, so that he may see how the operation of a general therapeutical law must be limited in its application to a particular instance. But in the sufferer from headache it is all but impossible to divine the particular susceptibility of anodynes. And the physician who might very quickly perceive how far his patient's special organism might be likely to tolerate strong antiphlogistic or actively stimulating treatment, might be quite at fault in guessing whether a headache would be relieved or increased by a dose of opium.

The difficulty in administering opiates for the relief of headache is partly explained by what ensues after taking them for mitigation of pain in other organs. We do not doubt our ability to quell the pain of gastrodynia, enterodynia, or toothache, at least for a time, by an adequate dose of opium; but we know the reproach which is often thrown upon us by the patient, who with an aching head and sick stomach, assures us that he has only exchanged one kind of misery for another. This effect of opiates is worthy of a moment's discussion, not only because it is a headache, and

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therefore within our subject, but also because it is obviously related with the sedative treatment of headache in general.

After a dose of opium sufficient to induce sleep for several hours, the patient may feel upon waking a frontal headache, dull or sharp, accompanied with nausea and vomiting. It closely resembles what is called "a sick headache," and it may last for several hours. It is somewhat like what is complained of after intoxication, excepting that in the latter instance thirst is more prominent. Though there is probably more or less of cerebral congestion consequent on narcotism, the pain can scarcely depend upon that state. We have seen how any excitement of the brain, whether emotional or intellectual, is capable of inducing a painful state of the nerves of the brain. Therefore it is not surprising that any thing which so seriously interferes with the sensory ganglia as to compel them to sleep for a certain time, should occasion pain, when the soporific effect has passed off. That there may be some sympathetic influence from the abdominal organs, which have also been tampered with, is very possible, since in some persons the disagreeable consequences are averted by combining an aperient, especially a mercurial dose, with the opiate. But this does not always answer; and I believe that the disagreable and painful symptoms result from the action of the opiate on the nervous centres. Some persons are so constituted that within an hour or two after taking the narcotic, instead of being made to sleep, they suffer the same symptoms of distress, with the addition in some instances of extreme faintness.

It is a problem yet to be solved why narcotics should affect persons so differently. Few constitutional infirmities demand our pity more than the incapability of taking opium without detriment. With many no inconvenience whatever ensues. The paroxysm of pain has been subdued, sleep induced, and no discomfort of any kind is experienced. But seeing that such is the fact, however explained, we cannot be surprised that it should be difficult to administer narcotics for the alleviation of headache.

In many persons the attacks are too frequent to admit of such frequent recourse to doses of sufficient strength for the reduction of the pain. In others they occur in the day time, and though capable of causing great discomfort, they hardly warrant a withdrawal from the avocations of the day, in order that the subjects of them may submit to anodyne operation. But when the case is either severe enough to lay the patient aside, or when it comes on in the latter part of the day, there is no reason why the opiate should not be



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resorted to. My belief is, that we are over cautious in the use of these remedies for nervous headache. From an exaggerated fear of inducing congestion, we resort to the feebler agents, which are seldom found to be of much avail, and discourage the patient for the trial of more efficient medicine. I confess that for acute pain, I place very little confidence in henbane, hemlock, and lettuce, and hops. If the attack is to be met by narcotics, we should try first one or two grains of opium, or an equivalent of morphia combined or not with calomel or blue pill. In some persons the opium acts more kindly in conjunction with camphor; in others, with a saline draught. But if opium or its alkaloid cannot be resorted to, there are other efficient anodynes which may be appealed to; such are aconite, belladonna, and cannabis indica. Of these, aconite has been in my hands that which may be most relied on: the difficulty is really in its power. There must be enough, but it is more easy to pass from what is sufficient to what is excessive, and therefore dangerous, than in the case of any other narcotic. A little too much opium, we know the worst of. Even with belladonna it is only temporary delirium, or blindness that we have to dread; but a very slight excess of aconite puts the patient in peril by the depression of the heart's action.

It may not be amiss to relate an example of the caution requisite in the use of this powerful drug. For a lady who had for many years suffered intensely from attacks of headache, I prescribed the alcoholic extract. The remarkable relief which she derived from this medicine made her anxious to have it always at hand. The dose to which she had become accustomed was half a grain in a pill, and she was allowed to repeat the dose once after two hours if the pain persisted. She took a supply of such pills with her into the country, and she was in the habit of resorting to them as occasion required, with great benefit. But one day, when she was engaged to a dinner party, at some distance, she was attacked with her usual headache a few hours before the time of going out. She hoped to be enabled, by the use of the pills, to keep her engagement. Not finding so much relief as usual, she took a second pill, and was much better; but just before stepping into her carriage she determined to make quite sure of a pleasant evening, and therefore swallowed a third pill. Before she could arrive at her friend's house, she was taken frightfully ill; the carriage was stopped at a cottage by the road-side, and for many hours she was in great danger, with all the symptoms of aconite poisoning.

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I usually direct a certain dose of Fleming's tincture (from one to two minims), to be repeated after two or three hours if needful; or one-eighth or one-sixth of Morson's alcoholic extract. In some cases the effect is marvelous. The instances, however, in which I have seen most good result from aconite have been those in which there has been a more chronic species of pain—a constant soreness or disposition to ache. In these a small dose administered thrice daily has been found very salutary, whether combined with tonics or taken singly.

In these cases, again, I have known very great comfort ensue from the use at bedtime of a combination of salines, nervines, and ether. Thus in one of my patients whose brain seems to be always on the verge of aching, such a mixture is always at hand, and rarely fails to avert a threatened fit of pain, though it would be inadequate to the suppression of it when fully formed.

Chloroform inhaled will relieve or remove a headache; but its effect is too transient to be of much avail. I have given it by the stomach in its pure form, or as it exists in chloric ether, and sometimes with immediate dissipation of the pain; but the direct anodyne operation is uncertain, and I have sometimes doubted whether the good effects might not be due quite as much to the rubefacient action on the mucous membrane of the stomach, as to the narcotic influence on the sensorium.

The external use of anodynes might be oftener appealed to than it is. When discussing sympathy in relation to the production of pain, I adverted briefly to impressions of temperature on the scalp, and indirectly to anodyne applications, and I expressed a strong opinion that the media of communication are the vascular nerves. I know not in what other way to explain the relief afforded to an aching brain by the application of a pad, soaked in a mixture of warm water and laudanum, to the forehead and temples. This measure is preferable to the employment of stimulating liniments, which, besides the inconvenience attending their use, may do harm by exciting the capillary circulation of the scalp, and by sympathy, that of the interior.

In some cases great alleviation is derived from the use of sinapisms or other rubefacients applied to the spine; but it will be generally found when this is the case, that a certain amount of vascular disorder is added to the nervous pain, either as an effect of this, or as the concomitant result of a common cause. But when the pain is more purely nervous, and occurs in a person of high neurotic sensibility, the irri-

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tation of the cutaneous nerves may add to the distress instead of lessening it.

But, in addition to the decided narcotics, we have a useful class of agents conveniently grouped under the term nervines. Thus, there are, in the first place, the dietetic nervines, tea and coffee, which are invaluable in the minor degrees of nervous headache, especially when it has been the result of fatigue, either mental or bodily. There is, however, some danger in their use, for they not only dispel the pain in question, but they also recruit the nervous power in the brain so thoroughly as to tempt the patient to return too quickly to the very exertions which have done the mischief. But I am not acquainted with any agents which equal these substances in the power of removing the headache, without leaving inconvenient results. And as their physiological operation is so purely cerebral, restoring the intellectual faculties, and ministering to the sensation of personal well being, as well as lessening any sad emotions, we have here an additional presumption, were any required, that this headache is seated in the nerves which are immediately related with the molecular action of the brain.

The medicinal nervines are also of use, and chiefly valerian, camphor, castor, and the fetid gums. Of these, valerian is at once the most efficient, and the most easily taken, whether as an infusion, or in the form of volatile tincture. But these substances are less beneficial as remedies for an attack of pain than as correctives of the neurotic sensibility which gives rise to them.

This latter treatment may be said to be prophylactic to the attacks, and curative of the diathesis, and it is of far greater importance than that which merely contemplates the removal of the present pain. It is superfluous for me to talk to this assembly of the methods of correcting this diathesis by air, diet, and exercise, or by removing those faults in the digestive organs, or in the uterine system, which have induced it. Nor shall I discuss all the various tonic and other medicines conducive to this end which have been recommended. I shall confine myself to those of which I have had most experience, and which have best prospered in my hands.

There are two which stand far in advance of the rest—quinine and arsenic. Iron will do much when there is an obvious deficiency of the red corpuscles of the blood, in conjunction with the diathesis in question, but its value is not so specific as that of the remedies which I have named.

The modus operandi of quinine in the cure of ague and

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of nervous pain, is not without mystery. Were it only a remedy for the cure of that remarkable series of phenomena comprehended under the name "intermittent fever," a comparatively simple hypothesis might present an adequate key. One might begin with presuming that the malarious poison in the blood induces a certain change in the fluid, analogous to the process of fermentation, and that after the eliminative action of the skin, the blood returns to its former condition, with retention of enough of the poison for producing in a definite period a like process, the very poison being, in all probability, capable of multiplication in the blood; for were it not so, how could the disease remain for months after removal from the malarious source? Admitting such a theory of the disease, it would not be difficult to append to it the hypothesis, that quinine destroys the poison, or prevents it from developing that change in the composition of the blood which eventuates in periodical fever. But quinine is as certain a remedy to the neuralgia which follows a catarrhal attack, or that which is the consequence to a slight blow on the head; cases in which there is no reason for presuming a chemical vitiation of the blood. If the former hypothesis would fit the facts or the philosophy of ague, it will not account for the cure of neuralgia.

The operation of this substance, indeed, is so unequivocally exerted on the functions of nervous substance, and with no direct proof of its affecting the composition of the blood, that one would be rather tempted to frame an hypothesis which should bring the cure of ague within the scope of a neurotic process.

In an admirably reasoned argument by Mr. Paget, in a lecture on the rhythmical action of the heart, strong grounds were offered by that eminent physiologist for the belief that rhythmical actions depend on processes of molecular growth, occupying definite periods of time. If this be true of physiological phenomena, is it not likely to be applicable to pathology? In those neurotic affections of periodical recurrence, neuralgia, asthma, epilepsy, etc. may it not be that a portion of the nervous substance in some central part suffers an error of growth, which occupies a certain period, perturbs the natural function of the part for a certain time, and ceases, till a new growth has been developed, and runs its course in like manner. I have a patient who every day is subject to the following attack, and has been so for the last eleven years, without one day's intermission. At 4 P. M. she is seized with clonic spasms of the left arm and the left side of the neck, which last for three hours, and then

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subside. No mental impression, no opiates, no tonics, no baths, no diet, no change of air, no galvanic currents, no chloroform inhalation, nor whatever the wit of any doctor has hitherto devised, has succeeded in preventing the attack. Once by chloroform inhalation I succeeded in cutting short the paroxysm; but the remedy was worse than the disease. The only remedy which has lessened the violence and duration of the fits is quinine in large doses taken every day. Great hopes were built on arsenic; but the mucous membranes were intolerant of this agent.

Now the periodicity of such an attack is perhaps no greater a mystery than the periodical evolution of nerve force in the nerves of the heart, if we presume the growth in an abnormal form, of a portion of the nervous centre related with the motor nerves in the subject of this singular excitement. Tendency to recurrence of like action is a well marked attribute of nervous substance, and implies the ready establishment of new forms of growth and action; and it lies at the root of habit in sensation, motion, and thought. Whether in health or in disease, new changes of life and action in the nervous system easily become permanent. Were it not so, what would become of progress and education?—A morbid habit is the continuation of a casual abnormal action. A strong impression is made on the nerves of the heart, and the rhythm of the pulsation is changed: from that time the change may continue. The nervous structure retains its new mode of growth and action: it is an excess of that tendency which belongs to nervous substance in general. An infinitesimal molecule of brain undergoes a change in the production of a thought; and from that time forth, so long as its life endures—in other words, as long as memory is intact—the molecule grows in the same form, undergoing an everlasting series of births and deaths, but maintaining its identity by its perfect similarity of reproduction. And so, as I have said, a new phase of being and action may be impressed on a portion of the nerve centres connected with sensation and motion, and may become permanent. When this occurs easily—when new modes of action are more easily impressed on some than on other individuals, such persons have a neurotic diathesis, a liability to nervous disorder.

A morbid habit is the perpetuation of what should be a temporary state and action; and it argues a diseased tendency to assume so readily a new condition.

A medicine which breaks the habit may be a substance that nips the new growth, compelling the part to return to

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its former development. It is like a new element introduced into a soil, destructive of particular organisms. Such may be the operation of quinine, arsenic, zinc, copper, and the vegetable nervines.

I am not so ambitious as to endeavor to construct a new theory of intermittent fever, but I strongly surmise that in the progress of discovery there will be another reaction from the modern excess of humoralism towards a modified and improved neurological pathology, and that new forms of molecular growth in nervous tissues, evolving abnormalities of nerve force, or new forms of nutrition in secretory tissues, will be discovered, deriving, perhaps, their pabulum from altered blood, but which altered blood will be only one of the series of changes.

Allowing, however, that intermittent fever consists mainly in toxœmia, it is not difficult to understand how in the districts where the poison is rife, there have been noticed in different seasons alternations of that disorder with purely neurotic affections. What, after all, is blood disease? Is it a mere chemical change, such as is effected in an inorganic fluid by the introduction of a new element? Chemical change there may be, but there must be far more of change in the growth and life of those organic cells which form so large a part of the fluid. A poison which may at one time act on sanguineous cells, and interfere with or modify elimination, so as to produce the phenomena of fever, may at another time have a modification which affects vesicular neurine, and occasions neuralgia and strange spasms. Those who are familiar with the history of epidemics must be well aware how interchangeable are fevers and nervous diseases. Wild maniacal dances have followed close upon black pestilences, neuralgia upon agues, etc.

Whether tonic medicines, which act chemically, are restorative or catalytic, it is probable they must enter into and take part in the cell-life, whether of the blood or the tissues.

Modern researches, especially those of M. Briquet, into the physiological operation of quinine, go to prove that its special influence is exerted on the nervous system, and that in large doses it depresses rather than excites the principal functions of that system. It is therefore conceivable that if a new form of life has been produced in that system by the operation of a malarious poison, or by any other cause, such an agent as quinine may alter and destroy it. At a certain hour in the day certain nerves begin to ache, and the pain continues for several hours, and then subsides.

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There must be either in the periphery or in the central termination of those nerves, some new development of nerve life. Large doses of quinine are swallowed, and the pain appears with diminished force, and in time departs.

Without pursuing any further speculation on the modus operandi of these medicines, which are at once tonic, anti-periodic, and anti-neuralgic, I now proceed to observe that quinine appears to me to be of all remedies that which is most extensively and constantly serviceable in headaches, whether strictly nervous, or neuralgic. It at one time helps to remove that irritable condition of the nerves, which makes them take offence at any thing unusual in the degree or kind of cerebral action, or at what is occurring in distant organs, and at another time it proves subversive of that very condition of nerves in which the paroxysm of pain consists. It would be less frequently productive of disappointment were it given more liberally and more unflinchingly. Small doses will not avail. And we must be prepared to set aside, or to pacify the fears of our patients, who from the peculiar sensations in the auditory nerves are beset with phantoms of plethora and apoplexy.

If the case has been of recent origin, three grains of quinine thrice daily will usually be a sufficient dose. But if it has been of long standing we must double this quantity, and in some instances ten grain doses must be administered thrice in the day.

Many substances may be advantageously combined with the quinine in order to render it more agreeable to the stomach, especially sedatives, such as extract of hemlock and of hops. I generally administer it in the form of pills, as being more convenient, and less disturbing to the stomach. When the liquid form is used we may add hydrocyanic acid if needful.

Other combined substances may be auxiliary to the specific influence of the quinine, as in the well known formula of quinine, compound galbanum pill, and hemlock.

Every one to whom I am speaking is familiar with that peculiar affection of the hearing which is complained of by those who take quinine in large doses. It is often, as I have hinted, so troublesome as to deter the patient from persevering with the remedy, especially when, as is common with those who suffer headache, there is an impression on the mind that the vessels of the head are disposed to fullness. It may be a reason for moderating, but not for withdrawing, the remedy.

We have seen when considering the probable seat of the

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pain in headache, that the ganglionic nerves which accompany the blood vessels, and are distributed over the membranes and the substance of the encephalon, are the nerves affected. Now if one thing be more distinctly proved by observation than any other, as to the action of quinine, it is that this substance lowers the frequency of the heart's pulsations. This must be effected through the nerves which determine the rate and rhythm of those pulsations, and which are ganglionic. There is here therefore an analogical reason for expecting that quinine may exert a special influence on those nerves which accompany the cerebral vessels.

Next in importance to quinine as a remedy for headache, comes arsenic. It is not surprising in endeavoring to account for its medicinal action, whether as a remedy for ague or for neuralgia, we should think of its poisonous power, and therefore presume it to be catalytic, or destructive to some materies morbi. Whether its action is so purely catalytic, or whether it consists in disturbing and overcoming abnormal forms of growth in the tissues, is difficult to determine. But while we know that in the normal state of the body it produces only two appreciable effects on the mucous membranes, the skin, and the nervous system, we need not look further for the wonderful control which it exercises over diseases of the skin, and over obstinate neuralgic affections. The very extent of its power is an inconvenience in the employment of this substance.

The form of headache in which I have found it most efficacious, has been not so much that which springs from an excessive irritability of the cerebral nerves, as that which comes in distinct paroxysms, and at regular intervals. These are cases in which, after the termination of a paroxysm, the nervous matter grows gradually again into that form which eventuates in a paroxysm. This growth is destroyed by the arsenic. If the hypothesis of a toxic agent be preferred, an agent requiring a certain time for its elaboration, and then for its destruction in the paroxysm which it has induced, we may say that the arsenic has in some way prevented the formation of the agent, perhaps by a quasi-chemical process.

In the administration of this medicine I have preferred small doses—three or four minims, largely diluted, taken thrice daily, and continued for periods of time varying from two to four months.

A long interval separates the degree of value possessed by these two remedies for headache, from that which belongs to any other agents. Still there are other remedies,



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not without importance, to which we may be driven by the idiosyncrasies of our patients. According to my own experience, the first in this class is zinc. The oxide and the sulphate have to be given for a long time before they produce any decided effect, but the patience of the physician and of the sufferer will generally be rewarded, especially if a steady and well graduated augmentation of the dose be enforced, as the stomach becomes more tolerant of it. To eke out the time, to gain temporary advantages satisfactory to the feelings, and confirmatory to the confidence of the patients, until the more permanent good has been effected, it is well to combine the zinc with some neurotic cordial. Camphor avails in one, galbanum or castor in another, or musk, or sumbul, and the rest of these singular nervines. But none of these combinations can compete in convenience and efficacy with that invaluable salt, the valerianate of zinc. Many years before this substance was introduced, I had been in the habit of prescribing a well known combination of oxide of zinc, extract of valerian, and extract of hyoscyamus, with a degree of benefit which had often far exceeded my expectations. And I remember the eager interest with which I first observed in one of the foreign journals the announcement of this new combination of zinc and valerianic acid.

If I may venture on such a remark, I should say that, judging from the prescriptions which I have met with, this medicine is usually given in doses far too small. My own knowledge of the larger doses was, in the first instance, accidental. For a lady suffering a singular laryngeal spasm after influenza, I had prescribed a grain of valerianate of zinc in a powder (as she was unable to swallow a pill), to be taken every three hours. Six grains had been directed to be distributed into six powders, but the dispenser had sent six powders, each containing six grains. In the morning I found that the powders had been taken with marvelous benefit, and no distress to the stomach. I need not say that this accidental lesson was not lost upon me, and that I have since prescribed the medicine in bolder doses than previously.

Iron may perhaps be classed next to zinc in value. Some practitioners would place it higher. When neurotic susceptibility is conjoined with poverty of coloring matter in the blood, its value can scarcely be over praised. But even without this conjunction there are cases in which ferruginous preparations have great efficacy; but we are oftener checked in the use of this metal when we administer it in other

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diseases, by complaints of the pain or distress which it excites in the head, than by any other symptoms attendant upon its use. Still every practitioner must have remarked its signal utility in cases of headache with great debility, especially when the constitution has been worn down by previous disease. The carbonate has been used more frequently than any other form for the cure of strictly neuralgic headache. It is difficult to find a reason for the preference which many have given to this preparation, unless it be, that as it is very partially soluble, and is therefore given in large doses, it enters the system in very minute quantities at a time. Perhaps, as it is applied to so extensive a surface in the gradual travel of its large quantity through the tube, more may eventually enter the blood than when a small dose of a more soluble salt has been taken.

Of copper I have very little experience as a remedy for cephalalgia. I have used it in the form of ammoniaret, as in epilepsy, but with no very decided results. Were I pressed for a new agent, or a new combination in some very refractory case, I should try small doses of the sulphate of copper, in combination with quinine, as in Sir Henry Halford's favorite combination for epilepsy.

Nickel was first brought before the notice of the profession by Dr. Simpson. He one day introduced me to a gentleman who had been a sufferer in an unusual degree, and for a long time from headache, and in whom sulphate of nickel had been of more avail than other remedies, but I did not learn what those other remedies had been. I have since then employed it in several cases, and I think always with some benefit; the dose has been a grain thrice daily.

It is highly probable that all the metals have more or less control over those new forms of neurotic life in which nervous diseases consist, and we may yet add some shafts to our quiver, tipped with selenium, cerium, and cadmium, to which Dr. Simpson has directed the attention of the profession.

When speaking of quinine, I ought to have remarked that beeberine in large doses, has seemed to me to act in a manner very similar to that of quinine.

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## II. *Observations on Scarlatina.* By Professor Trousseau.

The following are some of the most interesting points in M. Trousseau's clinical lectures on scarlatina:

Scarlatina varies in form, appearance, and intensity, to an extent witnessed in no other exanthem. Variola is always variola, whether benign, distinct, or confluent; and to be recognized constantly by its characteristics. Measles observes always pretty much the same course, its diagnosis being simple, and its complications capable of being provided for. In scarlatina there is nothing fixed or regular, and its concomitant or consecutive accidents are foreseen with extreme difficulty. Years may pass without a single death resulting from the disease, when an epidemic may arrive which will commit greater ravages than cholera or typhus. Nothing of this kind is observed in variola or rubeola. There occur, indeed, from time to time, epidemics that are more fatal than others; but in the most innocent of these there are always found bad cases of variola; while even in those which are most destructive, slight cases are met with. Scarlatina takes on a character of benignity or malignity according to the genius of the prevailing epidemic.

The eruption appears in some patients four or five hours after the fever of invasion has set in, and does so very rarely after the first day. The cases in which the eruption is said to appear only on the third day must be quite exceptional, and are mostly to be explained by the defective examination of the practitioner and friends. It is generally on the face that we seek for the first manifestation of an eruption, and it is there we find it in rubeola or variola; but in scarlatina we should search for the earliest traces on the trunk, the belly, and bend of the thigh. It may be found there thirty-six hours before it exhibits itself upon the face and neck, and hence a cause of error in the date of its appearance.

The fever of invasion is very acute, and accompanied by a rapidity of pulse met with in no other exanthem. Before many hours have passed the patient complains of the throat; and if care be not taken this affection of the throat may be mistaken for a simple angina, and the treatment adopted for it may be highly injurious in scarlatina. When the malignant form of scarlatina prevails, while the pulse in the adult rises to 130° or 160° on the first day, nervous phenomena appear, such as excessive agitation, utter insomnia, and subdelirium. Such symptoms as these are met with in very few inflammatory affections of the throat, and are very

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seldom observed at the onset of other pyrexiæ: so that from the very first the scarlatina exhibits all its malignity:—this malignity of the first day being such that individuals may succumb before twenty-four hours have elapsed. In cases like this, the young practitioner may be taken off his guard, and may be led into giving a too favorable prognosis. Suspecting the advent of scarlatina and being present at its onset, he may promise a speedy subsidence of the violent fever on the appearance of the eruption. All prognostications in this disease must be made with the greatest reserve.

The duration of the eruption is very uncertain, bearing, in this respect, no analogy to that of variola and rubeola. Commencing on the first day, it may still be very vivid on the twelfth or fourteenth, although generally it becomes paler towards the eighth or ninth. In simple cases it lasts five or six days only. It is by no means so uniform and constant in character as represented in books. When severe and confluent it has the appearance of a tincture applied to the whole surface, but in the more simple cases it consists in a multitude of minute, round, red points completely separated from each other, and differing entirely from the spots in measles. The peculiar red rash of scarlatina is also accompanied by a miliary eruption, which, even when not visible to the naked eye, feels to the touch like shagreen. It consists in minute vesicles, which in thirty-six or forty-eight hours become filled with a lactescent fluid, and is very seldom absent in confluent scarlatina. If we examine a scarlatina eruption with a magnifying glass, we may be easily convinced it is not of one uniform color as in erysipelas, but consists in elevations that resemble an excessively close eczema.

It is the tongue, however, which presents the most specific appearance in scarlatina, and is, perhaps, as special as is the eruption in variola. The first day there is nothing peculiar about it, but the next, if the patient has been sick, it is of a deep green or yellow color, the point and edges being of an excessively bright red. When there has been no vomiting, it is of a milky white at its posterior part. Towards the third day the redness still further increases, and from the fourth to the fifth all the pasty appearance disappears. The tongue, now of a scarlet red, is swollen, painful, covered with projecting papillæ, and peels by friction. Towards the seventh or eighth day it becomes smoother, but preserves its redness. By the ninth day the epithelium becomes evidently reproduced, but the tongue scarcely recovers its normal appearance before the twelfth day.

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M. Trousseau protests against the doctrine usually laid down, that, when the eruption is vivid and comes out well, the patient runs less risk of suffering from the various morbid phenomena. On the contrary, he declares it to be a law in scarlatina as in variola that the gravity of the case is in direct proportion to the intensity of the eruption. In distinct variola life is in as little danger as in scarlatina with slight eruption; and the issue of a confluent variola is surrounded by as many perils as is that of a confluent scarlatina, in which the entire skin is of a vivid red. The more intense the eruption, the more serious are the symptoms, and the more guarded should be the prognosis.

The sore throat of scarlatina forms one of the most difficult subjects of pathology. It is easy enough to describe its ordinary appearances, whether in the grave or the simple form, but there is sometimes a form met with of the most formidable character, which sets all prevision at defiance. The patient may have seemed to be going on very well, the fever having abated, and the rash disappearing, so that the most favorable prognosis has been delivered, when towards the eighth or tenth day of the disease there appear swelling at the angle of the jaw, neck, and sometimes face, abundant stinking sanious discharge from the nares, sudden enlargement of the tonsils, great frequency and smallness of the pulse, delirium, coma, coldness of the surface—the patient gently expiring at the end of three or four hours. The nature of this affection is quite obscure, although it is probably referrable to diphtheritic complication. In this form, where the angina comes on at the eighth or ninth day, M. Trousseau does not remember a single instance of recovery; while even in the gravest form of angina, commencing with the disease, and reaching its maximum from the fifth to the eighth day, it is scarcely ever fatal.

Desquamation commences where the eruption ceases; as for example at the cervical region on the sixth day, and on the trunk on the seventh, and it lasts about fifteen days upon the arms and legs. Its characters are best marked on the hands and feet, and it is useful to bear this in mind. On the trunk, the squamæ may vary in size from two or three millimetres to one or two centimetres in diameter; but on the legs and arms, where the epidermis is thicker, they may attain four or five centimetres. They are detached in large plates, as after erysipelas and phlegmon, the desquamation never taking the fine furfuraceous appearance as in measles. To see the latter we must look closely, or even detach the minute exfoliation by friction with the sleeve of a black

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coat. In scarlatina the squamæ are far more manifest, and cannot be mistaken.

Speaking of the accidents which may attend this period of the disease, M. Trousseau first alludes to the affections of the nervous system. The patient having entered into full convalescence, he suddenly becomes seized with vomiting as at the commencement, great agitation, and extraordinary frequency of pulse, death being preceded by convulsive or comatose symptoms. This terrible state of things may come on when you are quite at ease as to the issue of the disease; and that without any consecutive anasarca, albuminuria, hæmaturia, or other circumstance having happened to explain this fearful state to which children as well as adults are liable—so careful should we be in prognosis in an affection like scarlatina, which cannot be regarded as cured until long after all morbid manifestations have ceased, death in the course of a few hours being still even possible during convalescence. These nervous accidents coming on during the desquamatory period, are a hundred times more dangerous than those met with at the commencement.

Anasarca is especially observed in the medium form of the disease, and affects not only children who have been exposed to cold or other imprudence, but those who have been watched over with the most anxious care. So rapid is the infiltration in some cases, that within twenty-four hours the swelling may occupy the entire body, and attain a size not met with in chronic diseases, affections of the heart, or nephritis. In other cases it is limited to the face and extremities. Although it is true that children usually recover from this anasarca by the aid of hygienic measures alone, it is no less so that on some occasions they die. Pain in the head and confusion of vision are complained of, and then convulsions are imminent. These may sometimes be warded off by seating the child with his head erect and his legs hanging over the bed, and administering a smart purgative. Generally, however, the attack of eclampsia is not to be prevented, and death may soon follow, not indeed the first time, although that is not very rare, but after several attacks following each other at short intervals.

Hæmaturia is an extremely common occurrence, but it is generally overlooked. When the blood is discharged pure, or only slightly changed by the acids of the urine, giving a blackish color to the fluid, no mistake may be made; but when it is emitted in small quantity, and the urine is only of a rose color, it will be probably overlooked. It may be detected by the precipitation of globules after long standing,

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and by the enormous quantity of albumen the urine contains. This is the albumen of the blood, and is not precipitated white, as in Bright's disease, but of a deep brownish color.

Among the less known complications of scarlatina may be mentioned pleurisy and pericarditis. What is very remarkable, is that a pleurisy coming on at the decline of the disease takes on at once a malignant aspect, not only in the fact of the abundance of the secretion that follows, but by the rapidity with which it assumes the purulent form—by the eighth or tenth day from the commencement of the effusion. Suppuration does not take place quite so rapidly in the pericardium, which too is implicated seldomer and at a later period than the pleura. It is to be remembered that rheumatism is of extreme frequency during the convalescence of scarlatina, which will explain why pleurisy and pericarditis are by no means uncommon. It is a curious fact that the rheumatism, notwithstanding the essentially malignant character of the exanthematous pyrexia, is of no great gravity, and may be cured without therapeutical intervention. Still, occasionally here, as in puerperal fever, we sometimes observe the most terrible form of rheumatism, which may be termed the suppurative form.

Bearing in mind the tendency of the exanthemata to run a fixed course, if scarlatina exhibits no serious accident, the less we do the better we shall treat it. All practitioners are agreed that the antiphlogistic treatment, as bleeding, active purging, and starvation, is more likely to prove injurious than useful; and even when really inflammatory affections supervene in the course of the affection, such as local phlegmasia affecting the tonsils, the lymphatic glands, or the cellular tissue, antiphlogistics still fail, probably on account of the sceptic character of the disease. All admit, however, that mild laxatives, producing two or three stools a day, are of use in moderating the violence of the febrile action.

During the acute period of the disease, when the patients die, they seem to succumb to the great modifications exerted on the nervous system. These may be manifested by the extraordinary heat of skin (produced, according to Bernard's experiments, through altered action of the splanchnic nerves), excessive vomiting or diarrhœa, delirium, coma vigil, or convulsions. In such cases, experience has amply confirmed the utility of the employment of cold affusions, as recommended by Currie. To put this bold treatment into practice, however, the practitioner must have arrived at such a point as to be able to make light of public prejudices and patients' fees. The treatment is not applicable to

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mild cases, for which mere expectation suffices, but only when the disease threatens to prove fatal, so that of three children thus treated, we may still lose two. "For a long time past I have employed these affusions, first in my private practice, and then at the hospital; for I have never yet done any thing in my life without having first tried it at my own risk and peril. I declare to you that I have never had recourse to them without deriving some benefit; and, so far from the affusions having ever done mischief, even when they have not saved the patient, they have moderated the accidents and retarded the issue.

In acting thus in private practice I certainly ran great risks, and I have often been ill recompensed for fulfilling my duty with this rigor. Still I have done it, and I continue the practice now that I have no more to fear, when I am getting old, and my position is established, and I can assume a responsibility that alarms me no longer."

As, however, the incurring such responsibility may entail a destruction of prospects that a young practitioner fears to risk, he may still, to a certain extent, follow out the treatment he knows to be best, while seeming to fall in with the public prejudices. Thus we may employ cold affusions in reality, although the friends of the patient believe them to be warm. Scarlatina, especially when malignant, is the disease of all others in which the temperature rises highest—to 41° C. in the axilla, for example. In case of affusions we apply lotions, at a temperature of 25°, which is an extremely cold temperature for a scarlatina patient, seeing that a difference of 15° or 16° exists between the surface of the body and the water applied to it. The patient being placed naked on the sacking, you pass a sponge, wetted in water at this temperature (which the friends regard as hot), very rapidly over the whole surface, and then, without drying the body, return him to bed and cover him up. An hour after the skin is found less arid, its heat less mordant, while there is a diminution in the frequency of the pulse. The other nervous symptoms also abate. After a very limited period, as two or three hours, the same group of symptoms appear, sometimes just as before. We must then repeat the lotions or the affusions, and so go on two, three or four times a day, during five or six days in succession. As to the eruption itself, it is almost invariably found to be more vivid after the application; so that the friends, witnesses to the amelioration of the symptoms produced, urge the repetition of the lotions as long as peril continues.

Together with the affusions some internal remedies may



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be employed, foremost among which is carbonate of ammonia, given in quantities of from 30 to 60 grains per diem. Of musk, 3 to 6 grains are sufficient, though as many as 15 may have to be prescribed.

In the great majority of cases of scarlatina maligna there is nothing to be done for the throat itself, M. Trousseau having tried all the various means that have been recommended without benefit. Of all these he attaches the most importance to the careful application of hydrochloric acid. As to the form of angina which comes on about the ninth or tenth day, and is attended with diphtheritic complication, all local measures are useless, our chief aim being to keep up the powers by stimuli, food, and quinine.

The anasarca, when not extensive, is best treated by rest in bed, tepid drinks, and moderate diet. When the urine is bloody, acid drinks, uva ursi, mixed with syrup of turpentine, digitalis, and gentle laxatives, speedily produce relief. When the hemorrhage is considerable, sulphuric acid and tincture of rhatany should be employed. When the anasarca is very extensive, and rapidly produced, convulsions usually occur, and death often follows. In this case we should give active purgatives, and keep the patient with his head erect, and his legs hanging down. Scarifications, or large blisters, may also be applied to the legs. When the convulsion comes on, musk, with a small proportion of belladonna, should be given. Another means M. Trousseau has frequently found the advantage of during the last twenty years, is compression of the carotids. When the convulsion especially affects one side, the compression should be especially made on the opposite carotid; while, when the convulsion is nearly equilateral, it should be made, first on one carotid, and then on the other; or, if it does not produce too much obstruction of respiration, on both at the same time. The compression should be continued for fifteen or twenty minutes on each artery, and as its maintenance is irksome, we should have the aid of an assistant, or instruct the friends in its performance. As soon as the acute accidents have disappeared, the eclamspia and the hæmaturia, which usually precede or accompany the anasarca, having passed away, we should give gentle diuretics, especially nitrate of potash and digitalis, giving at the same time, as recommended by Graves, iodide of potassium in large doses. But the anasarca and albuminuria of scarlatina, which are usually cured in two or three weeks, in certain cases only form the first stage of Bright's disease; and we must always distrust a case when we find the albuminuria continuing

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after the acute symptoms have subsided. With respect to the pleural and pericardial complications which are met with at or about the same time as the scarlatinal anasarca, they are best treated by blistering and puncture of pleura or pericardium. But it will be always found that, at the end of ten or twenty days, the effusion is converted into a lactescent or purulent collection. By means of iodine injections we may be still enabled to cure this dangerous complication in children, but we shall strive in vain to relieve it in the adult.—*Gaz. des Hôp.*

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III. *Anchilosis of the Stapedio-Vestibular Articulation, (the base of the Stapes and the Fenestra Ovalis) associated with Rheumatism and Gout; with an Account of* 136 *Dissections of the Disease.* Read before the Royal Medical and Chirurgical Society. By Mr. Toynbee of London.

The author commences his paper by showing that there is a distinct joint between the circumference of the base of the stapes and the inner surface of the fenestra ovalis, and that this stapedio-vestibular joint (perhaps more constantly used than any other in the human body) is very subject to be affected with rheumatic gout (rheumatic arthritis), producing in various stages of its progress various degrees of deafness. For the better elucidation of the nature and treatment of rheumatic arthritis in the stapedio-vestibular articulation, the author commences by making some general observations upon the subject of rheumatism and gout, the results of which may be thus briefly stated. He considers the poisons of gout and rheumatism to be thus far identical in their nature, that they both consist of an excess of the nitrogenous element of the blood, and that this nitrogenous element in the case of rheumatism is fibrine, and in that of gout albumen. The view that the element in the blood causing rheumatism is fibrine in excess, is supported by the following facts:

1. That this fibrine is found in so great excess in the blood of rheumatic patients, that Lehmann asserts that of all diseases the fibrine is in general increased in the largest proportion in acute articular rheumatism and pneumonia.

2. That this excess of fibrine also manifests itself by the excess of urates eliminated from the blood in patients with the so-called rheumatic diathesis.

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3. That attacks of acute rheumatism come on contemporaneously with the inability of the system to use the excess of fibrine in the blood, and to eliminate the excrementitious urates.

4. The attack of rheumatism is produced by any cause which prevents the conversion of the fibrine of the blood into the fibrous elements of muscles and other fibrous organs, and the due elimination of the urates.

5. In cases of acute rheumatism, the excess of fibrine in the blood finds an outlet in fibrinous effusions, while in chronic rheumatism it finds an outlet in hypertrophy of the fibrous structures.

6. All curative measures for rheumatism do good in proportion as they cause the excess of fibrine to be eliminated in the form of urates or consumed in the process of assimilation.

7. All preventive measures in rheumatism consist in the use of dietetic or other hygienic rules, whereby the entrance of an excess of fibrine into the blood is prevented, or when it is introduced that it may be assimilated, and the effete matter eliminated as urates.

That the nitrogenous element in the blood which causes gout is albumen in excess, is indicated by the following facts:

1. Whether known to us as globuline, gelatine, chardine, gluten, etc., the textures containing albumen are those implicated in gout. These textures may be divided into four classes; as the blood cells containing globulin, the cellular, mucus, and purely serous membranes containing gelatine, the cartilages containing chardine, and the cartilage of bone, gluten.

2. That globulin, the coagulable matter of the blood cells, is more abundant in phlethoric gout, and that one source of the increased quantity of uric acid in the blood of some gouty patients may be ascribed to the increased quantity of globulin in the blood.

3. The food inducing an attack of gout is usually peculiarly rich in albumen.

The analogies and differences between gout and rheumatism are thus presented in a tabular view:

GOUT.

Causes:

1. *Predisposing*—An excess of the nitrogenous element of the blood, probably albumen, from the use of too highly nitrogenous, or from mal-assimilated food.
2. *Exciting*—The sudden addition to the blood of so large

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a quantity of albumen, that it can no longer be assimilated, and becomes a poison; or any circumstance, as fatigue, which prevents this assimilation, and consequently the elimination of the urates. The effort to rid the system of all poison constitutes the attack of gout.

Seat—Vesicular tissue:

1. *Cellular tissue*—As bone cartilage, or cellular membrane.
2. *Mucous membrane*—As the lungs, liver, stomach, kidney, etc.
3. *Serous membranes*—As pleura, peritoneum, arachnoid, synovial membranes, etc.

### Rheumatism.

Causes:

1. *Predisposing*—An excess of the nitrogenous element of the blood, probably fibrine, from the use of too highly nitrogenous, or from mal-assimilated blood.
2. *Exciting*—The sudden addition in the blood of a large quantity of this element, or any circumstance, as the application of cold, which prevents the assimilation of the element, and the elimination of the urates. The violent effort made to rid the system of the poison constitutes attack of acute rheumatism.

Seat—Fibrous tissue:

1. *Muscular fibre.*
2. *Hard fibrous tissues*—As tendons, aponeuroses, fibrous visceral envelopes, as the fibrous layer of dura mater, pericardium, synovial, and other serous membranes.

The author then shows that in the disease properly called rheumatic gout, both fibrous and vesicular, otherwise named fibrinous, and albuminous, structures, are affected, and he is thus led to consider the diseases of the stapedio-vestibular articulation, in which both fibrous and vesicular structures are affected, as constituting what is called ordinarily rheumatic arthritis, or rheumatic gout. The author then proceeds thus to describe and classify the 136 dissections laid before the society, of rheumatic gout causing anchylosis in the stapedio-vestibular articulation.

In 49 cases there was simple expansion of the articulating border of the base of the stapes; in 20 there was expansion of the articular border of the base of the stapes, with calcareous whiteness; in 25 there was expansion of the whole of the base, and effused bone connecting it to the vestibule; in 21 there was osseous matter effused between the stapes and the fenestra ovalis, producing simple anchylosis; in 12 there was osseous matter effused around the fenestra ovalis.

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In addition to the above 136 specimens of bony anchylosis, the author alludes to 53 dissections of membranous anchylosis, the particulars of which had been previously laid before the society; in the latter cases the ligaments of the stapedio-vestibular articulation had become more rigid than natural. The author states that rigidity of the ligaments, which is the usual morbid condition in cases of deafness in advancing years, may, as a general rule, be diminished.

In speaking of the diagnosis of the disease, the author states that there is usually what is called the uric-acid diathesis. Frequently the patient has had an attack of rheumatism, gout, or rheumatic gout, but the only symptom in the ear is gradually increasing dullness of hearing, usually worse during a cold, the adapting power of the ear being the first to be diminished. There is usually an absence of the distressing noises present in debility of the nervous apparatus of the ear. The mucous membrane of the fauces and nose is congested and tumefied, the membranous meatus auditorius is also red, and often tumefied. The osseous walls frequently present rounded bulgings. The membrana tympani is often opaque and dull on its surface. Respecting the prognosis.—If the ligaments only are affected, as they are in the earlier stages of the disease, or if the circumference of the base of the stapes be merely slightly expanded, considerable benefit may be obtained by persevering treatment. This treatment consists in the use of general remedies, whereby the poison of rheumatism and gout is removed from the blood, and in the local application of counter-irritants. In the latter stages of the disease, when bony anchylosis has taken place, no benefit can be attained further than the removal of the symptoms arising from congestion. The paper concludes with a recital of cases illustrative of the disease, with details of the pathological conditions found in some upon dissection.

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# CHRONICLE OF MEDICAL SCIENCE.

## MEDICAL PATHOLOGY AND THERAPEUTICS.

1. *Treatment of Chronic Rheumatism with Arsenic.* By JAS. BEGBIE, M. D. &c. &c. of Edinburgh.

It was at the close of the last century that cod-liver oil was accidentally introduced into practice, in the wards of the Manchester infirmary, as a remedy in chronic rheumatism. It was in the same place, and in a similar manner, some years subsequently, that arsenic was first administered for the cure of that disease. In the writings of Haygarth and the elder Bardsley will be found many cases illustrating its efficacy. In more recent times it has not disappointed expectation. Speaking of the use of arsenic in chronic rheumatism, Dr. Christison says, "I have known several cases of this nodosity of the joints, as some authors term it, get well under the continuous administration of arsenic for some weeks; and it appeared to me that the commencement of the cure concurred with the first development of the physiological effects." "Arsenic (says Dr. Fuller, one of the latest writers on rheumatism), judiciously administered, and carefully watched in its effects, is one of the most valuable remedies in the chronic forms of rheumatism."

Many years ago, an industrious workman, approaching the decline of life, applied to me for the relief or cure of the crippling and painful swellings of the small joints of his hands, and particularly of his feet, under which he had long labored, and by which he had been rendered utterly unfit to pursue his usual avocations. The pains became aggravated at night, and under vicissitudes of temperature, and the patient was sensitively alive to changes of weather. It was with great difficulty and considerable suffering that he had been able to hobble to my door. When I speak of his case as one of chronic rheumatism, I sufficiently describe it. Under remedies external and internal, orthodox and empirical, he had derived no benefit; and seemed almost hopeless of relief. He was ordered to take five drops of the liquor arsenicalis after each meal, and to add one drop every third day till the eyelids became affected. He faithfully

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followed the prescription for many weeks, and underwent the trifling disorder which characterizes the operation of the drug. He continued his attendance for several months. The knobbiness, and stiffness, and pain of his joints gradually subsided and disappeared; he walked repeatedly to my house, a distance of a mile and a half, with ease and comfort; he improved in general health; at last he ceased his attendance, he returned to his workshop, and I saw no more of him.

A married lady, in the prime of life, the mother of several children, the descendant of gouty ancestors, and a sufferer in earlier years from painful and disordered menstruation, consulted me last autumn, for symptoms corresponding in some measure with those exhibited by this workman. She was very lame from the stiffness, swelling, and deformities of her toes and ankle-joints, and quite incapable of holding a needle, or directing a pen, from the painful nodosities of her fingers and hands, the distorted appearance of which presented a remarkable uniformity on both sides of the body—symmetrical, in obedience to the law of blood diseases, as noticed by Dr. Budd. She had feverish, restless nights; a worn-out, emaciated look; a tendency to hectic paroxysms; a depraved appetite; a loaded tongue; along with copious lithates in the urine, and considerable derangement of the biliary secretions. These symptoms had supervened on a miscarriage she had suffered in the spring, followed by a protracted and anxious attendance on a near relative during a dangerous illness. The severity of the attack had, in a great measure, subsided before she came under my care. She had been judiciously treated in the north of England, where she usually resided: colchicum, iodine, and various other remedies had been employed; but her disorder went on. After it had been corrected to some extent by depurants and laxatives, without any relief to the local disease, she was ordered to take the liquor arsenicalis in the usual dose, and with the usual instructions. She continued two months under my care; the medicine was taken regularly during that time; no well marked physiological effects ensued; but a gradual improvement in the condition of the feet and hands took place; she was able to walk with comparative comfort, and to handle her knife and fork, with ease. Her general health had improved, the secretions of the kidney and liver had assumed a normal character; she added to her usual remedy the free use of lemon juice, and an occasional warm bath. She left Edinburgh, with instructions to continue the arsenic, and begin the use of cod liver oil. I

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learned, in the course of a month, that she had made progress towards ultimate cure; that the pains, and swellings, and stiffness were gradually subsiding; that a fullness of the eyelids had been observed, along with a dryness of the mouth and tongue; that she had intermitted the use of the arsenic for ten days, in consequence of these symptoms concurring with uneasiness and slight pain in the stomach; but that she had failed to witness any of the other phenomena for which she had been directed to watch. I subsequently learned, that with the exception of the short interval referred to, she had persistently taken the arsenic for three months, without any other unpleasant consequences than those alluded to; and had, on the contrary, during the time it was suspended, experienced some increase of the pain, and stiffness of the small joints, which had, however, given way on her resuming the medicine. She was directed to continue the use of the mineral in diminished doses, and to adhere to that of the cod liver oil. The last accounts bear that she is greatly improved in health, and able to walk with ease to a considerable distance.

The case of the lady differs in some respects from that of the workman. His presented the true characters of chronic rheumatism; hers manifested those of rheumatic gout, as it is called, a painful and obstinate affection to which females suffering from uterine disorder are peculiarly liable. It will be remarked, that in the former case the mineral acted quickly and successfully; in the latter its effects, both physiological and curative, were slowly and imperfectly developed. The cases together, bear witness to the correct observation of Dr. Bardsley, and the earlier exhibitors of arsenic in chronic rheumatism—that while in the one form of disease the medicine will be found to cure without assistance, in the other form it will be necessary to call in the aid of other remedies. Still, in the language of Dr. Fuller, it will be found "a faithful ally."—*Edinburgh Med. Jour.*

2. *On the Constitutional Effects produced by Substances introduced into the Urethra.* By Dr. Crawcour of New Orleans.

An interesting paper has appeared in a recent number of the New Orleans Medical News, by Dr. Crawcour, giving in detail some experiments upon the constitutional influences of remedies when applied to the urethra. We have prepared an abstract of his observations on this point. The subject is novel and instructive.



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In 1857 Dr. Crawcour observed that intense narcotism resulted from the passage of a bougie, smeared with morphic ointment, into the urethra, and he especially noted the fact that the influence of the remedy was very great compared with the small quantity of the drug used. The effect was almost immediately produced, and lasted the usual period.

In another instance, a bougie, smeared with morphic ointment, was passed into the urethra, and was followed by another bougie, tipped with an ointment of atropine, ten grains to the drachm. In one minute the patient was incapable of locomotion, and he soon fell asleep.

In another instance, a catheter, smeared with a little atropine ointment, was passed into the urethra of a very muscular man. The instrument remained in five minutes, and before it was withdrawn the pupils dilated, and the voice became husky.

Dr. Crawcour believes that the characteristic effects of atropine have been produced by less than one-fiftieth of a grain, yet the agent acted with wonderful promptness and vigor. These experiments also show that certain portions of the urethra absorb medicinal substances more rapidly than others. It seems that this property of absorption resides in the prostatic portion of the urethra and the neck of the bladder, for when the ointment was carried rapidly into the bladder, no effect was produced; neither was narcotism produced by the injection of morphine in the urethra until the membranous portion was reached; but immediately on reaching the prostatic portion, intense narcotism followed.

3. *On the Difficulties of Diagnosis in certain Cases of Pneumonia. Clinical Lecture, Hotel Dieu, Paris.* By Professor Trousseau. Translated by C. G. C.

Scarcely is one initiated into the mysteries of our art, when the diagnosis of a pneumonia is regarded as the easiest thing imaginable; and moreover this is the prevalent opinion in regard to diagnosis of the inflammation of the pulmonary parenchyma. A violent chill at first, then pain in the side; the first, second and third days, bloody sputa, beginning with the color of apricot marmelade, then that of prune juice, then that of rust, etc. Crepitant rale; blowing sound mingled with crepitant rale; blowing sound alone—bronchophony—in short, intense fever. Such are the leading symptoms of the disease, and he must be badly instructed who observes these morbid phenomena without recognizing them as he would a familiar acquaintance.

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All this is very fine and very accurate as a mere book statement, but it is not always the same at the bed-side. Listen now to the recital of several cases which have recently occurred in my service here, which show how difficult a diagnosis may sometimes be:

A man aged fifty years entered the ward of St. Agnes on the fifth day of a pneumonia. I came to his bed; I observed a subicteroid tint, a moderate difficulty in breathing, and I said there is a disease which resembles a peripneumonia. Why? I shall not tell you now; but, in short, the expression of a peripneumonia is only like itself, and when one has seen only a hundred cases defile before him, he learns that such patients have a peculiar stamp.

I interrogated this man in a pneumonial point of view.

Have you had a chill? No.

Have you had pain in the side? No.

How did you take the fever? At first had some warmth; the heat augmented and I had a fever.

Do you feel pain in any part? When I take a full breath, I have more restraint on the left side than on the right, but I feel no pain.

Do you cough? Two or three times a day.

Do you expectorate? No.

But what do you spit up when you cough? I do not spit at all.

Nothing, in short, of sputa; and I put him in every position without any manifestation of pain in the side.

Thus, then, there was no initial chill. Now this symptom is rarely absent in a pneumonia, and it is sufficient of itself in the largest number of cases to lead us to investigate for a pneumonia.

The pain in the side, the cough, the expectoration, were all absent. We auscultated him and found nothing except the respiration slightly feeble at the summit of the left side. We went over again the stethoscopic examination; and at last on the side of the shoulder at the extreme end of the clavicle, in a circumscribed point not larger than a franc piece, we perceived a little blowing and a very slight crepitant rale. In the axilla there was nothing heard, nor in the lesser scapular region, nor in any other part of the chest.

Behold now a pneumonia discovered, but you will understand that it was necessary to be very positive about it. My impressions were, however, just; for on that evening, even the blowing occupied all the subclavicular region; the next day all the superior lobe, the next day all the inferior portion, and on the fourth day he died. His lungs are now before you, and they exhibit a pneumonia of the third stage.

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This case shows you on one part that the diagnosis of pneumonia is not always easy, and on the other, that there really exists pneumonia which is essentially malign and suppurative; in effect, such a pneumonia does not follow in any degree the ordinary course, but enters in a trice the suppurative stage.

I need not add that the man was delirious during the last two days of his life, which is always the case when death is inevitable from inflammation of the parenchyma of the lungs.

Lately I was called in consultation by one of my confreres for a young lady recently married, who had come from abroad to enjoy the pleasures of Paris for a season. She had been taken sick with a severe chill, but was much better the following day; but on the succeeding one (or third day), she had another chill.

As the patient had come from a country where intermittent fever prevails regularly, her physician naturally thought her disease was a palustrian fever of the tertian type. The sulphate of quinia was administered and the paroxysms were arrested, but there remained a slight continued fever. Under these circumstances I saw her. She complained vaguely of a pain in the left side of the chest, but the most careful auscultation revealed absolutely no abnormal condition. The husband, the patient, and one waiting upon her, affirmed that there was neither cough nor expectoration. In view of the fever and a well marked sub-icteroid tint, we were led to fear a typhus affection; when on the eighth day of her attack she began to cough, and then could be heard a slight blowing at the base of the left lung. In the evening the blowing had increased, and in thirty-six hours after, it extended to the upper portion of the inferior lobe of the same lung, and a pneumonia was fully unmasked. There was yet no expectoration, however, and scarcely five or six attacks of coughing in the course of the day and night.

Such cases as these you will often meet with in the course of your practice—therefore the duty of your being duly advised in regard to them.

You will remember that six days ago, I requested Professor Grisolle to come and give me the benefit of his experience in order to determine the question of a pneumonia or a pleurisy.

The case was that of a man fifty-three years of age in Saint Agnes ward, who entered the hospital with a dullness that occupied all the chest from top to bottom of the left side. The patient had a resonance of the voice resembling a bronchophony, but at the same time simulating egophony

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at several points. During several days while he remained here, there was no pneumonic expectoration; there were, though, some sputa, slightly green, but not tenacious. There had been no initial chill, but he was delirious during the first night he passed in hotel dieu. There was no pain in the side.

On auscultating the man with great care, we found readily this blowing from apex to base, and having in view the delirium and grave character of the symptoms, we decided on pneumonia; but the pain in the side and the chill being absent, we began again to be undecided.

On percussing, we found, as I have already said, absolute dullness from top to bottom; it seemed more pleuritic than pneumonic. We investigated also for another sign, that is, the want of expansion of that side of the chest (which never fails to exist in a well marked case of pleurisy), remarking, however, the existence of a respiratory sound in all the anterior part, and even in the lateral region—phenomena which would not probably exist in a pleurisy, because, unless there had been pre-existent adhesion, the liquid would be level.

*Cin. Lancet & Ob.*

4. *Medical Excerpts.*

*Belladonna for incontinence of urine.*—A female child, nine months old, had been affected with incontinence of urine from birth. The urine continued constantly to dribble away, and the clothes of the little patient wet with this irritating secretion.

The urine was clear, slightly acid, and without any abnormal sediment. The patient commenced 10th February 1857, 1-24th of a grain of extract of belladonna, three times a day, and gradually increased it, until March 12th, when she was taking 1-12th grain, and so continued up to 26th of May, when she was so much better, that sometimes three or four nights would pass without her passing water during the whole night. Iron was now added to the belladonna, and the recovery henceforth was so complete, that the patient had complete control of the discharge; but it was necessary to continue the remedies much longer, before the irritability of the bladder was subdued, as it yet returned so soon as the belladonna was withdrawn.

*Schmidt's Jahrbucher.*

*Calumba in vomiting.*—M. Lami observes that while we are thankful for any new therapeutical agent, we must not forget

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the value of those we possess. Among these, fresh powdered calumba has always in his hands proved a most efficacious remedy in nervous, spasmodic, or atonic vomiting, as in that of pregnant women. He gives 15 grains with a few spoonfuls of wine, an hour before meals, three times a day.

*Freedom from phthisis among colliers.*—M. Francois has recently brought this subject before the Belgian academy of medicine. Attached to a colliery, he has since 1818 observed that while the miners suffer from anæmia, asthma, bronchorrhæa, affections of the head, carbonaceous expectoration and pulmonary emphysema, and die prematurely, they are remarkably free from phthisis, although their relatives enjoy no such exemption. He states that this observation has been confirmed by numerous colliery practitioners. M. Martens is disposed chiefly to attribute the immunity to the great degree of atmospheric pressure the miner is subjected to. The academy has resolved to request the government to obtain some exact statistical information on the subject.
*Bullet. de l'Acad. Belge.*

*Injection of sesquichloride of iron in severe menorrhagia.*—Dr. Breslau relates a case in which very obstinate and copius menorrhagia, accompanying a retroflexed state of the uterus, after resisting various other means, speedily yielded to an injection of equal parts *liq. ferri sesq.* (Bavarian Pharmacop.) and distilled water.—*Monatschrift für Geburts.*

*Inhalation of sal-ammoniac in chronic catarrh.*—Dr. Gieseler speaks highly of this. A drachm of dry muriate of ammonia is heated over a spirit lamp, and the patient inhales the vapors. He says the same means is of service in scrofulous affections of the eyes, and in catarrh of the bladder.

*Plantain in diarrhœa of children.*—M. Anciaux states that he has found a mucilage prepared from plantain seeds (plantago major) of great use in the catarrhal form of diarrhœa, and also in the mild inflammatory form.—*Presse Belge.*

*Red color of the valves of the heart in alcohol poisoning.*—Dr. Voltolini, after enumerating the not very certain signs of alcohol poisoning that are known, describes an appearance he has met with, in order that attention may in future be directed to the point. It consists in the cinnabar red color of the pulmonary and aortic valves. The color cannot be wiped out, and gives to the valves a very beautiful ap-

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pearance. A remarkable quantity of dark thin blood was found also in the vena cava ascendens and the subclavian vein. Dr. Santlus met with a similar appearance of the valves in 1856. It remains to be seen whether this appearance is characteristic of alcohol poison alone, or is found in other affections inducing fluidity of blood. The author found no mention of it on the perusal of a great number of accounts of autopsies, in which such fluidity prevailed.

*Berlin Med. Zeitung.*

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## SURGICAL PATHOLOGY AND OPERATIONS.

### 1. *Diagnostic Characters of the two varieties of Venereal Sores.* By Mr. Henry Thompson of London.

1. *The soft or non-infecting chancre.*
2. *The indurated or infecting chancre.*

| *The soft chancre.* | *The indurated chancre.* |
|---|---|
| Anatomical characters:<br>Form, rounded, often irregularly so.<br>Edges sharp, well defined, as if cut with a punch; rather overhanging, not adhering closely to subjacent tissues.<br>Surface, flat, but irregular, "worm eaten;" often with yellowish or grayish matter adhering.<br>No induration of tissues around, unless caused by caustic or other irritant; in which case, the thickening is not defined in its limits, but shades off into the surrounding tissues, and has more or less the aspect of inflammatory action. | Anatomical characters:<br>Form, rounded.<br>Edges, sloping, not sharply cut; hard, sometimes a little elevated, closely united with subjacent tissues.<br>Surface, hollowed or scooped out, but smooth as if varnished; often grayish at the centre.<br>Induration, well defined, incompressible, like a cup of cartilage let into, or set upon, the tissues beneath, and moveable over them; no inflammatory areola. Usually makes its first appearance between the fifth and the tenth day; never after the twentieth. Generally long survives ulceration.<br>Induration varies in degree somewhat with the situation, but when slight is nevertheless always defined. |
| Pathological tendencies:<br>The secretion is contagious, purulent and plentiful, hence these chancres are rarely single; often, perhaps most commonly, multiple, one giving rise to another. It is usually slow to heal, has a tendency to spread; and is liable to take on phagedænic action. | Pathological tendencies:<br>The secretion is scanty, rather serous than purulent, and is not very readily inoculated. Hence the sore is usually single, rarely multiple, and if so the sores appear simultaneously.<br>It is indolent, but less so perhaps than the soft chancre. Rarely takes on phagedæna. |
| The soft chancre appears, from the records of practice, to appear with a frequency about four times as great as the indurated chancre. | Either sore propagated by inoculation, invariably produces its like. |

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| **Characteristic gland-affection:** In many cases (but not in the majority) the inguinal glands are affected; in which case, one gland, usually, rapidly inflames and suppurates, and an open bubo is the result. The pus, at first, is inoculable, and capable of producing a soft chancre. | **Characteristic gland-affection:** It is INVARIABLY followed by slight swelling and marked induration of the inguinal glands on one or both sides (the sore being on the genital organs); usually several glands are affected; they are hard, incompressible, and roll under the finger, are painless, and do not inflame or suppurate. |
| | Except in rare instances from over exertion, in scrofulous subjects, &c., but then the pus is not specific and not inoculable. |
| | The induration of the gland coincides in time with that of the chancre itself. |
| | The primary sore having disappeared, or being denied, the gland induration is an invaluable sign for purposes of diagnosis. |
| **Prognosis:** The well marked soft chancre is always a local affection, and DOES NOT AFFECT THE SYSTEM; and no "specific" treatment (mercury and iodine) is required. | **Prognosis:** Constitutional syphilis will certainly declare itself sooner or later. Mercury will retard, modify or prevent the evolution of secondary symptoms. |

2. *Foreign Body retained upwards of Twenty Years in the Nasal Passage.* Reported to the Philadelphia College of Physicians. By Dr. ISAAC HAYS.

Dr. Hays stated that the interesting case communicated to the college at its previous meeting, by the president, in which a foreign body had remained four years in the lungs, recalled to his mind a case in which a foreign body had remained in the nose for probably upwards of twenty years, and a brief notice of which might interest the fellows.

Some years since I was consulted by a lady of between twenty-five and thirty years of age, on account of ozæna, with which she had been troubled ever since childhood. The disease resisted various means of treatment, and I discontinued my visits and lost sight of the case.

About four years subsequently, a fellow of the college, Dr. Wm. Darrach, enquired of me if I recollected the case, and stated that the patient had afterwards fallen under his care, and that finding it very intractable, he had determined to examine into the condition of the bones of the nose. With this object he introduced a probe through the nose into the nasal fossæ, and while moving this instrument about there, he accidentally dislodged a mass which dropped into the opening of the nostril, and by an effort on the part of the patient was expelled. On examination, it proved to be an old fashioned glass button with a brass wire eye.

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The mother of the lady stated she remembered distinctly that one of her sons, when a child, had a coat with similar buttons.

Dr. D. supposed that the lady, when a child, had been playing with one of these buttons, had placed it in her mouth, whence it had slipped into her throat and produced strangling, and that in the effort to expel the button it had been forced up through the posterior nares and lodged in the nose. Here as a foreign body it had become a source of irritation, and produced the disease for which we had been consulted.

3. *Paronychia; the Use of Nitrate of Silver as an Abortive.* (Bulletin de Thérapeutique.)

M. Guinier, professor agrégé to the Society of Montpelier, has just published some remarks upon the abortive treatment of paronychia, which has up to this time constantly succeeded in his hands.

When the pain has lasted only a few hours, and begins to be throbbing, Dr. G. slightly moistens all the red and painful surface a little beyond the limits of the rose color, and carries lightly over this a pencil of nitrate of silver. This operation ought to be continued at least a minute, until the epidermis becomes brownish. The drop of liquid which has served to moisten the cauterized surface, and which has become a concentrated solution of nitrate of silver, is allowed to dry in its place. It completes the cauterization, and secures the success of the operation. The skin, of a deep brown color, in a few hours becomes of a fine black color, as if charred, and from this time the cure is complete. In a few days the cauterized epidermis peels off, and no trace of the disease remains.

This operation, performed at the beginning of a paronchia, immediately arrests its progress, without causing pain; and persons subject to the affection, who have once experienced the good effects of nitrate of silver, so applied, do not fail to have recourse to it again, when the pain announces the invasion of a second paronychia.

It is not exactly so when the paronychia has lasted a certain time, and the pain has become pulsating. Immediately after the cauterization, the pain becomes intolerable; but after several hours it lulls, and soon ceases entirely, unless suppuration has commenced.

In this latter case, if the cure is not obtained so rapidly,



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the paronychia is at least arrested in its progress. The pain becomes more endurable, and it is certain that the cure is complete much sooner. In any case, cauterization does no harm, and it may be considered to be adapted to all periods of the disease.—*Am. Med. Monthly.*

4. *Of Aconite and Quinine in Purulent Infection.* (Gazetta Stati Sardi.)

The cases of cure in purulent infection are very rare, and are scarcely to be found widely scattered through the annals of science. We note now the two following cases, observed by M. Turchetti, notwithstanding the doubts which may exist as to the true nature of the disease.

Case I.—Very extended and very deep carbuncle of the interscapulary region, with profuse suppuration and mortification of all the muscular mass of the nucha and of the back. When M. Turchetti saw the patient, the gangrene was not arrested, and symptoms of purulent infection had supervened. He advised frequent lotions with the water of Confani, cauterizations with the nitrate or silver, a ptisan of cinchona and valerian, a strengthening diet, tonics; and besides, 4 grammes of tincture of aconite, in 125 grammes of sulphate of quinine; to be taken in divided doses in the 24 hours. Gradual recovery, after various vicissitudes.

Case II.—A young woman, recently confined; the removal of the placenta was not regularly made, and a part appears to have remained in the uterus. Soon fever, with all the symptoms which are usually attributed to purulent infection. Same treatment.

In less than forty-eight hours the secretion of milk had reappeared, the lochia had lost their fetid odor and their putrid appearance; the pain and swelling of the limbs had ceased; the beatings of the heart had lost their frequency and quickness; in short, in a few days the patient was cured.—*Ib.*

5. *On Collyria or Eye Washes.* By Mr. Wilde of Dublin.

Mr. Wilde gives some aphorisms and observations upon certain diseases of the organs of sight. These observations refer to treatment. After a strong recommendation of fomentations medicated in various ways, Mr. Wilde says of lotions:

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"One of the best lotions I know of, in cases of accident or after operation, is cold water, iced, if more agreeable to the patient's feelings; but, to be effective, it must be applied with a single layer, or two folds at most, of fine old linen or cambric, so that evaporation may proceed with facility, and such cloths should be removed whenever they begin to become hot or dry, which will much depend upon the heat of the parts upon which they are applied, and the temperature of the surrounding atmosphere. In such cases the difficulty consists in having the directions carefully followed up; for, on coming to visit the patient, we constantly find a quarter of a pound of lint or a folded pocket handkerchief, steaming hot, placed upon the affected organ. This need not be wondered at, when a recent work on ophthalmic medicine recommends the application to be made by 'means of compresses!' Another mode of applying the fluid, formerly much in use, was the eye-glass, and it is still recommended by some physicians. Although this was any thing but a pleasant, and very often proved to be an injurious remedy, from the pressure it exercised on the inflamed globe, and the irritation which the stimulating fluid produces when coming in contact with so large a surface of the conjunctiva, yet it fulfilled the intention of the practitioner; for the eyelids being opened while the glass was inverted over them, and the head thrown back, the fluid absolutely came in contact with the conjunctiva and cornea, whereas now the lotion only touches the skin of the eyelids. Most vegetable and mineral astringents, as well as sedatives and narcotics, are employed by the ophthalmic prescriber, in collyria or eye-washes; for example, the preparations of opium, prussic acid, laurel water, zinc, alum, lead, copper and tannia; minderus' spirit, infusions of hops, green tea, or other vegetable astringents, and rose, elder, or orange flower water are generally the vehicles employed. One of the injurious consequences of eye washes, and one that has, notwithstanding all which has been written upon the subject, been but little attended to, is, that certain salts, particularly those of lead and alum, deposit themselves on the cornea, not merely in the pit of the ulcer, but where there is the slightest abrasion of its conjunctival surface. Spirit and water is also a useful application; but neither dropped into eye nor used as a lotion have I seen much benefit derived from a solution of bichloride of mercury.

"The various holy wells in Ireland, to many of which pilgrimages were made from great distances, especially on their patron saint's days, in former years, were all more or

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less celebrated for the cure of sore eyes. Indeed, whatever good they did beyond that effected by the faith in their virtues was in ophthalmic cases. Take, for instance, a case of strumous ophthalmia in a young, or chronic ophthalmia in an old person, who travels thirty or forty miles on foot, buoyed up by accounts of cures, said to have been effected at these popular watering-places; and arriving there imbued with the most implicit faith in their efficacy, bathing the eyes continually with the cold clear spring, need we wonder at improvement following this most useful application, together with change of air and hope? Are not cures of other diseases among the upper classes effected through similar agency, although with more parade? but the poor Irish are sneered at, because their water cure is denominated 'superstition.'

"I have not found chloroform either in lotion or vapors effective in cases of photophobia; but latterly this symptom of disease has among all ranks of society lessened very much."

Poultices he does not recommend.

6. *Accidental Impalement on the handle of a Parasol.*

A few days ago, a lady was carried into St. Thomas' hospital from the London bridge railway station, with the statement that she had fallen, and been taken up insensible. She died whilst being carried up the steps, and within ten minutes of her fall. An omnibus driver, who had witnessed the occurrence, stated that whilst walking down the slope of flags from the station, she had appeared to catch her foot or tread upon her dress, and that she then fell heavily forwards. At first, therefore, the conjecture was that either apoplexy or cardiac disease, or possibly a fracture of the base of the skull, had been the cause of death. It was soon found, however, that there was much blood on the upper part of her dress, and on further search a small penetrating wound was discovered, which passed through her mantle and other articles of apparel, and entered the thorax immediately beneath the left clavicle. The cut in the cloth mantle had sharp edges, as if done by a pointed instrument, but the linen articles were torn rather than incised. The wound in the skin was very much what might have been expected from a dagger. The conclusion which now suggested itself was, the case must be one of murder by the stilletto. At a subsequent period, however, a gentleman who had been on the

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spot, and who had assisted in lifting her up, produced a parasol which he said he had found at the time entangled in her dress, and had withdrawn immediately, without, however, being in the least aware that he was drawing it out of her body. The parasol handle had been broken off, leaving a sharp splintered end, the condition of which left no room for doubt, but that it had been the cause of the fatal injury. The autopsy showed a penetrating wound of the thoracic parietes and of the apex of the left lung, the instrument having then passed obliquely upwards into the root of the neck. The pleural cavity contained a large quantity of blood.—*Med. Times & Gaz.*

7. *Surgical Excerpts.*

*Hydrocele treated by electricity.*—Dr. Rodolfi of Milan has applied electricity for the cure of hydrocele in four cases, and reports very favorably concerning its effects, not only the fluid disappearing in all, but its reproduction being prevented in three of the cases. Bunsen's or (better still) Daniel's pile should be employed.—*Presse Belge.*

*New local application in erysipelas.*—M. Anciaux speaks in high terms of the following application for erysipelas and some other cutaneous affections. Alum reduced to impalpable powder, 30 parts; white precipitate, 1 part. Rub up well together, and place the powder in a bottle, and then add from 90 to 100 parts of glycerine. Shake the bottle until the mixture assumes a creamy consistence, and repeat the shaking whenever the application is about to be employed.—*Ib.*

*Ossification of the stylo-hyoidean ligament.*—M. Achard exhibited to the pathological society of Brussels a very curious specimen, viz: a complete ossification of the cartilaginous prolongation which unites the styloid apophysis to the os hyoides. In the adult, this is replaced by certain fibres known as the stylo-hyoidean ligament; but, in this specimen there is not the slightest trace of ligamentous fibres, the ossification being complete. The specimen was met with in a man, aged 45, in whom probably the primary cartilaginous condition had never been replaced by the ligamentous tissue.—*Ib.*

*Reunion of the separated pavilion of the ear.*—Dr. Linoli relates the case of an old woman, aged 70, who, falling

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down stairs, separated the entire pavilion of the ear, which only hung by a small thin strip of skin. The author, called to her immediately, resolved to try and obtain union by keeping the bleeding parts in contact. After encouraging the discharge of blood from the parts by tepid water, he exactly adapted the surfaces according to their natural relations, and kept them in situ by means of strapping and bandages. These were removed in part on the fourth day, the strapping not being taken off until the sixth, when adhesion was found to have become completely established. The dressing was replaced, and in less than a month the cure was completed, excepting that the sensibility of the pavilion continued impaired.—*Rev. Med. Chir.*

*Sulphur and nux vomica in hæmorrhoids.*—M. Van Holsbeek recommends the following formula as being rapidly beneficial. ℞ Sulphur. loti, sacchar. alb.; aa, ℥j.; ext. strych. nuc. vomic. gr. vj.; mucil. gum. tragacanth. sufficient to form twenty-four lozenges. The patient is to take two the first day, increasing the dose by one daily until six a day are taken. He now rests a few days, and then diminishes the dose in the same proportion, until he gets to the two again. If the cure is not complete, he must begin again; but it is rare to find the treatment required for more than a week. During its continuance alcoholic drinks and a too stimulating diet are interdicted. The treatment is applicable to all stages of uncomplicated hæmorrhoids.—*Presse Belge.*

*Use of chloroform in sounding for stone.*—It is always a mortifying occurrence to a surgeon to miss the finding of a stone in the bladder, and leave the discovery to be made by some one else. We not unfrequently have cases brought under our notice in which a patient submitted to lithotomy at one hospital, gives the statement that he has been previously sounded at some other institution, and told that he had no stone. These mistakes are especially liable to occur in young subjects, and when the stone is small and light. We believe, however, that the neglect to give chloroform, and to inject the bladder before the use of the sound, is fairly chargeable with many of them, and that the profession would gain in character, and individuals often be saved much annoyance, if these precautions were never omitted. To sound a squalling, struggling child, who in all probability has emptied his bladder at the sight of the instrument, is no easy affair, and not by any means likely to afford trustworthy conclusions. On the other hand, children bear

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chloroform remarkably well, and we are at a loss to conceive that any inconvenience would result from its habitual employment under such circumstances.—*Hospital Note.*

# BIBLIOGRAPHICAL RECORD.

I. 1. *On the Diseases of the Skin.* By ERASMUS WILSON, F. R. S. Fourth American, from the Fourth London Edition.

2. *Plates illustrative of "Wilson on Diseases of the Skin."* Fourth and Enlarged Edition. Philadelphia. 1857. Published by Blanchard & Lea. (Received from Geo. M. West, Richmond.)

THE practitioner of medicine, young in experience, and remote from the large institutions devoted to specialities in the medical art, finds no difficulty more perplexing than those which arise in the diagnosis of cutaneous diseases. With that ready tact characteristic of the American mind, he applies his common sense successfully in the treatment of general disease, or exerts his native ingenuity in the management of a surgical case, but he constantly feels himself at fault in his attempts to define the many varieties of skin diseases. He can neither give them their proper position, or apply to them their proper treatment. His neglect of hospital clinical study has deprived him of any previous familiarity with the modifications of eruptive diseases, and hence he has nothing left but to confess his ignorance of a numerous and very conspicuous group of maladies.

To obviate this common evil, the labors of many zealous students of eruptive diseases have been devoted, with both pen and pencil. With large opportunities afforded in the hospitals of the populous cities to study and classify these affections, and by calling in the aid of drawings and colors, Cazenave, Rayer, Willan and others well known to the

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medical student, have endeavored to afford to all, the opportunity of determining the variety of skin diseases which may be submitted to their care; and in this way much good has been done.

The great fault of most of these works, however, is to be found in that extreme minuteness and tendency to multiplication which often characterize the specialist. Every author endeavors to improve upon his predecessor. He discovers a new variety, and invents another long name, until such works are laden with the most formidable specimens of medical Latin to be found any where. The unlucky tyro, confounded midst the ever increasing subdivisions and the novel modes of classification adopted by rival authorities, surrenders in despair, and the eruption is left to take care of itself, or some wise "old woman" volunteers a prescription.

The work of Mr. Wilson, which has been long a favorite with the profession, has attained its deserved popularity, by avoiding the fault of too great diffuseness. The author adopts a simple and entertaining style. He strives to clear away the complications of his subject, and has thus produced a book filled with a vast amount of information, in a form so agreeable as to make it pleasant reading, even to the uninitiated.

Mr. Wilson adopts a natural mode of classifying skin diseases, which recommends itself to the good sense of all, abandoning the artificial classification of Willan, as leading to confusion and error, inasmuch as disorders of an opposite kind, and affecting different tissues, are forcibly grouped together, while different phases of the same disease are as arbitrarily driven apart. The author divides his subject into classes, depending on the various tissues affected, and reaches in this way a method of description alike simple and correct. Thus, the skin may be divided into four distinct organisms. The skin proper, or *derma; the sweat glands and ducts; the secretory glands and ducts; and the hairs, and their follicles.* Here we have, then, the four families of skin disorders dis-

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tinctly defined, of kindred origin and generally requiring like treatment. It is easy to elaborate this method of classification. We have those affections, idiopathic or generated in the organism itself—or another family of maladies, the result of special *external* causes, such as the itch produced by the burrowing of the acarus. Another division is naturally made of those affections produced by the excitement of special poisons, such as the peculiar animal poisons, producing small-pox and scarlet fever, or the syphilitic virus.

It is not our province, however, to do more than indicate the admirable method of arrangement adopted in the treatise before us. It is familiar already to many of the profession, and ought to be consulted by all. More especially does it deserve our praise because of its beautiful and complete atlas, which the American publishers have successfully imitated from the original plates. These lithographs from the establishment of Sinclair of Philadelphia, are highly creditable to American art, and we pronounce them by far the best imitations of nature yet published in our country. With the text book and atlas at hand, the diagnosis is rendered easy and accurate, and the practitioner feels himself safe in his treatment. We will add that this work, although it must have been very expensive to the publishers, is not high priced; for both the text and plates can be obtained for *seven dollars*. There is no reason then to prevent every physician from obtaining a work of such importance, and one which will save him both labor and perplexity.

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II. *The Parrish Will Case, before the Surrogate of New York. Medical Opinions upon the Mental Competency of Mr. Parrish.* By Drs. John Watson, D. T. Brown, M. H. Ramsey, Pliny Earle, Luther V. Bell, J. Ray and Sir Henry Holland, Bart. New York. 1857.

In the press of new medical publications, which has loaded our table for some months past, we have omitted to examine the portly pamphlet we now intend to introduce to our



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readers. The truth is, we were afraid to undertake this formidable volume, with its large type and wide margins, until we had cleared a way through the piles of calf and muslin, patiently asking for a favorable hearing. We therefore made the "Parrish will case" wait for a more convenient season, mentally concluding that some rich old man had left so much money as to set all of his relations to quarreling over it, and that the doctors, desirous to get their share of the plunder, had manufactured this book for the purpose, and had even taken the trouble to catch a live baronet, and a medical knight too, to add lustre to the production.

However, one day, with a brave heart, we undertook the "Parrish will case," thinking it at least well to know who had succeeded in getting the money, which we were satisfied must be a great sum, as nobody ever disputes the will of poor folks—such as doctors, preachers and the like. Agreeable surprise! Our task, so reluctantly commenced, was eagerly prosecuted, and the work, which had frightened us for so long a time, was as entertaining as a novel. And yet, there was but little to please in the perusal of the story revealed in those pages—nothing to admire in what was there portrayed—and whilst the intellect was engaged in a most exciting study—for there was displayed the workings and instincts of poor human nature, in its least attractive aspect—the heart was saddened in the perusal. "The love of money is the root of *all* evil."

As this interesting work will not find its way generally into the hands of the medical reader, we will in a few words sketch its object, and the causes which led to its preparation.

Henry Parrish, a New York millionaire, in 1842, and at the age of 54 years, made his will. He was then in perfect health, and his will was prepared with great care, and was marked with a nice balancing of all the claims of his family upon his bounty. He had no children; and after leaving his widow liberally provided for, and distributing much of his property among his kindred, he left his brothers his residuary legatees. As far as we can see from the work before us, and

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from other information, we may suppose that Mr. Parrish was worth $750,000; of which he gave his childless wife probably $250,000, and the remaining half a million to his relatives.

In 1843, while in Europe, he had an apoplectic attack, from which he apparently recovered; but in 1849 he had another fit, much more severe. He lived until 1856, entirely paralyzed on the right side, unable to articulate a word, and a hopeless and pitiable invalid. After the apoplectic attack of 1849, he also had a series of convulsions regarded as epileptic, at intervals, varying from eight days to six months. He also had various inflammations during this time—such as cholera morbus, inflammation of the lungs, abscess of the jaw, &c.

This poor old man, whose will has remained unchanged for *seven years*, during which time he had retired from business and was in the enjoyment of all his faculties, now having become a paralyzed epileptic invalid, unable to move himself or to speak a word, adds a codicil to his will, by putting a cross mark in lieu of his name, by which he gave to his wife, who was his nurse and companion, an amount of real estate, worth probably $200,000. In 1853 another codicil was added, which gives his wife $350,000 more, and in 1854 a third codicil revokes the appointment of his brothers as residuary legatees, and appoints his wife in their place. In short, his will, before he was paralyzed, gave his estate partly to his wife, and the remainder to his relatives; but his will, after the apoplexy, bequeathed the whole property to his wife.

The rich man died in 1856, and his relatives disputed the codicils depriving them of their interest in his estate. The widow resisted, and endeavored to maintain her right under the will; and the eminent gentlemen, whose names are found on the title page, were summoned as experts to testify as to the capacity of Henry Parrish to make a will after his affliction in 1849, whilst Mrs. Parrish's brother, Dr. Delafield, who was also the physician of Mr. Parrish, and Dr. Markoe,

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his son in law, gave evidence as to their opinion of his intellectual condition during this period.

We are not called upon to express our opinions on the result of this legal investigation. Suffice it to say, that though Drs. Delafield and Markoe supported the validity of the codicils, giving to the widow the whole property, and though this position was also advocated by eminent men, ministers, lawyers and others, yet the overwhelming reasoning of the experts on the other side, whose labors are found in this work under observation, and more particularly the close and irresistible argument of the leading medical witness, Dr. JOHN WATSON of the New York hospital, whose opinion, occupying 350 pages, is a triumph of medico-legal research, eventually succeeded before the surrogate, and the will was left in the main as it originally was prepared by the testator before his apoplectic seizure.

The ground passed over by the gentlemen consulted on this occasion, and more particularly by Dr. Watson, who evidently holds the leading position in the examination and discussion of the question, is very extended. He discusses, in the first place, Mr. Parrish's disposition and character in health, his ways of thinking and acting, and his feeling of attachment both towards his wife and his relations. Then we have a sketch of his diseases, and the alterations produced by them; and then follows the argument upon the point at issue—Is a man in this condition physically and mentally able to make a will? Not only are the general characteristics of apoplexy and its consequences analyzed, but the functions of the brain in health and disease—the various theories, suggestions and arguments of opposing counsel and opposing medical testimony, are rigorously scrutinized and powerfully answered. We hesitate not to say that there is no where in the literature of legal medicine a more profound or convincing monograph than Dr. Watson's opinion in the Parrish will case.

We cannot say much at this time of the other papers contained in this work, by Drs. Bell, Earle and others,

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although they contain forcible views of the question in its various aspects. We must say, however, that the "baronet" disappointed us in his crude and evidently hasty article, for we know him to be a medical philosopher and an accomplished scholar. Here, however, he does himself injustice; which we notice with surprise and regret.

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III. *A Manual of Medical Diagnosis—Being an Analysis of the Signs and Symptoms of Disease.* By A. W. Barclay, M. D. Cantab. &c. Published by Blanchard & Lea. Philadelphia. 1858. (Received of A. Morris.)

The art of diagnosis is to the physician what the examination of witnesses is to the lawyer, and requires in its perfection, a similar order of intellect and acuteness of observation. The medical man approaches the bedside of his patient, to listen to the evidence which will then be presented to him—not only by the signs and symptoms of disease which may be apparent, but also to be guided in some degree, by the declarations of the party himself, and the opinions and observations of those around him—to distinguish the true from the false, to trace effects back to their causes, and to sift the evidence until the facts, without offset or exaggeration, are clearly elicited. This constitutes the paramount although difficult duty of all those who pretend to treat disease on a sound basis.

It is in the exercise of this important task that we are to find the differences which mark the personal character and value of individual physicians; and hence it often happens that the most popular and indeed most successful practitioner owes his position more to his observing powers and the tact and readiness displayed in this *cross-examination* of the sick man, thus sifting and weighing the value of the symptoms displayed, than to any superior knowledge of the principles of medicine, or any additional information as to

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the method of cure. To find out what is the matter, is the object after all which is to be kept in view. To gain this information, we study the structure of the human machine and its functions both in health and disease. This difficulty solved, and the application of remedies is only difficult, because of the impossibility of curing the malady, and not for want of knowledge as to what is to be done provided it is within the reach of the art.

The treatise of Dr. Barclay is based upon the only foundation upon which any accurate diagnosis can be erected; that is, bedside knowledge. We can no more sail a ship by a theory of navigation, than guide disease correctly without personal familiarity with its habitudes and consequences. The author has spent twelve years in one of the largest London hospitals. In these institutions one can reduce this investigation into the character of disease to a point of accuracy impossible in private practice. A systematic method of recording the evidence to be examined, a careful history of the case, and constant opportunities of correcting false premises too hastily adopted, must lead in time to a highly acute and very reliable judgment as to the relative value of all the phenomena of disease; and although this talent can be cultivated to a much higher degree of refinement by some observers than others, yet *all* must be improved by such a process.

To the American student, who unfortunately has not very frequent access to the bedside, and who oftentimes wofully neglects the opportunity when it is offered to him, this work is of undoubted value. He must feel, as he studies its careful detail of the intricate and difficult phenomena exhibited in the rise and progress of disease, how essential to him must such knowledge become, and he will rise from its perusal more anxious than ever before, to seek all the clinical advantages within his reach.

A very hasty examination of this work satisfies us that its author is a patient and laborious observer, who has taken advantage of the many facilities afforded him as the physi-

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cian in chief to a large medical charity. Dr. Barclay writes his views out plainly and with some force; and while we might not regard him as displaying any remarkable *individualité*, for we doubt whether his order of mind is either distinguished for originality or very great acuteness of observation, yet we here see what a sensible, thoughtful and accurate man may do in the attempt to throw light upon this great department of medical science. Every student may derive from his example a useful lesson; and the practitioner, who finds himself puzzled in the midst of anomalous symptoms and confused statements, can appeal to the pages of this treatise with a certainty that the information there to be obtained is at least reliable and sound. It is a good book and one which is destined to meet with a large circulation; for we do not know where to point out a work of such moderate compass, and yet containing so much information upon the art of diagnosis.

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IV. *Outlines of a Course of Lectures on the Principles and Practice of Surgery.* Delivered by E. GEDDINGS, M. D. Professor of Surgery, Medical College of South Carolina. Prepared from Notes taken during the Course, by Drs. WARING and LOGAN, and published by consent. Charleston, S. C. Courtenay & Co. Publishers. (Received of J. W. Randolph.)

PROFESSOR GEDDINGS is well known amongst us as a surgeon of ability and experience, reflecting credit on the southern profession, and adding influence and reputation to the medical school of a sister state.* Long familiarity with all the varieties of surgical disease, combined with the practice of many years, acquired during his professorship, have added to a natural facility of expression, which is evident even in these extremely crude and imperfect notes taken down in the lecture room by two of his students.

* We regret in this connection to state that Dr. Geddings has recently withdrawn from his chair in the South Carolina college.

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As the most complete treatise on surgery ever offered to the profession by a southerner, we have turned with interest to its pages, and can say with truth that the student will find it an accurate and valuable manual of surgery, both general and special. Although the author does not attempt in his short term of lectures to enter into the refinements of the art, he yet succeeds in presenting a very complete sketch of the whole field of surgery. His style is straight-forward, clear and frank, and bears the marks of earnestness and acute observation; and we hope to see our southern students especially, turn to this book, coming from one of their own most distinguished brethren, and give it that favorable reception which it deserves.

Dr. Geddings divides his subjects very naturally into three parts: General and constitutional surgery; the surgical affections of the different tissues; and lastly, topical or special surgery. His habit is to give a short sketch of the anatomy of the region involved, followed by a description of its surgical pathology, which leads to an account of the methods of relief afforded by the surgeon, either palliative or curative. We repeat, that we recommend this manual to the student as being fully equal to most of the popular text books imported from abroad, and superior to many which are not uncommonly found in their libraries. The South Carolina publishers deserve a word of commendation for the execution of this work. It is neatly printed, and is disfigured by fewer typographical errors than is usual with southern publishers.

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# EDITORIAL AND MISCELLANEOUS.

## *The Convention of the Colleges.*

THERE is a disposition with a portion of the medical press, and it also exhibits itself amongst the profession generally, to decry the results of the National medical association, which has been in existence for more than ten years. "Have we driven quackery from the land?" cries one. "Have we *reformed* the schools?" says another. "Are we rising as a class, in the estimation of the public, or can our professional morals be considered as improving?"

Besides those who expect the association to perform miracles beyond its power; to prevent human nature from betraying selfishness, envy, deceit and love of money, or to abstract from the mental characteristics of our race, that inherent love of life, which will ever lead them in their despair to plausible charlatans, beguiling with false promises, besides this unreasonable class, there are others, who complain, not of the power of the association to do good, but of its failure to do so. They expect five hundred gentlemen, unfamiliar with the rules of debate, and unpracticed in public deliberations, to meet together for three days, during which time they are to solve scientific problems, strike out original investigations, or scrutinize and correct elaborate statistics. Their duty is also to preserve a pure and honorable system of ethics, and to whip forty medical schools into good behavior, whilst the odd minutes of the session are to be devoted to minor objects—such as the extinction of quackery, the nurture of a national literature, and many other interests of like importance.

The recent meeting in Washington has not been spared the reproaches to which we have thus hastily alluded. Although the standing committees offered careful reports upon



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many important points in medical science; although the association exhibited both its power and its determination to use that power, to punish offenders against its ethical laws, no matter how high their position or how daring their rebellion; yet we hear the results of this meeting deplored by many as a waste of time equally unwarrantable and useless.

Upon this point we intend to take issue with our friends; for we believe that the two principal events of the Washington session are calculated to exert a powerful and most salutary influence over the well being of the profession. The first act to which we allude was the severe though well merited castigation applied to prominent members of the association—an act which stands as a warning and solemn precedent before the eyes of all. These offenders had successfully resisted the efforts of the largest local organizations of our country to bring them to punishment, or even to an acknowledgment of their errors. What the New York academy of medicine and the Philadelphia college of physicians failed to execute after months of strenuous endeavor, was effectually performed by the association in one day, and the repentant culprits pardoned at the foot of the gallows.

There was another movement instituted at the recent session, to which we attach much importance. We allude to the proposed convention of the medical colleges during the week prior to the next meeting of the association. This idea originating with Dr. John Watson of New York, will lead to an equable and steady advance in our method of instruction. The medical teachers of the Union must see the general dissatisfaction exhibited by the laity towards their present system of teaching. They feel these defects to be grave, if not vital. Indeed, under the wholesome influence of this association, all the medical schools have already improved much in the length and arrangement of their courses. The number of professors have been increased, clinical lectures delivered, and all the collateral advantages offered to the student, either free of charge, or at a very moderate cost.

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Now, at the instance of the association, the schools have agreed to convene and deliberate on the best course to pursue in order to remedy the evils acknowledged by all. They are prepared to move upward and onward. They can only do this by a united movement—a movement approved of by the mass of the profession—and they can only find this support in the approbation and moral influence of the association. We therefore regard the proposed convention of medical teachers as being the precursor of a general change for the better in the organization of our schools. They may commence cautiously, but none the less will it be productive of good. Every step in advance, receiving the cordial support of the preceptor and student, will encourage them to press on more boldly, and by this rational and united action, the great object will be gained.

Let us then be satisfied with the results of our eleven years' work. Harmony and kind feelings have been nurtured between brethren of all sections; correct and honorable rules for the guidance of the profession have been adopted and enforced; valuable additions to the literature of medicine have been elicited; and the schools of medicine are prepared to act unitedly in making an advance, cautious, but progressive, in their methods of instruction. We owe this and much more to the *American medical association.*

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## *Mephitic Exhalations.*

We have been struck with the following paragraph, which occurs incidentally in one of Dr. T. K. Chambers' recent lectures on deranged digestion. It may serve as a commentary on the platitudes of the theorizing chemists of Washington, who opposed the common sense view of the "National hotel sickness" adopted by Drs. Hall and Stone, on the ground that mephitism induced fevers but not diarrhœa:

"One source from which strangers contract this diarrhœa in traveling in Europe, is an evil capable of, and demand-

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ing, amendment: I refer to the filthy privies of continental inns. A gentleman, eminent in his profession and of good judgment, told me that, during a Pyrenean tour lately, he entirely escaped the diarrhœa which every body else without exception suffered from, by adhering to a strict rule of never entering one of these disgusting holes, but worshipping Cloacina under the pure light of the stars."

Those who have any stomach for this stale argument may look at Bouilland's chapter on "*enterite simple*," or diarrhœa, for farther proof of the sufficiency of the generally received etiology of this endemic.

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## *Medical Society of Virginia.*

THE annual meeting of this society commenced its session in the Athenæum on the 27th April 1858, at 12 o'clock, the president, Dr. Bolton, in the chair.

The objects contemplated by the society are the collection, discussion, interchange, preservation, and general advancement of medical knowledge throughout the state.

It contemplates under its organization the enlistment in the common cause of the prosecution of these objects, all the medical men of the commonwealth who are duly qualified by scientific attainments and moral standing, and who acknowledge fealty to the code of ethics adopted for the best interests and the good government of the profession.

The minutes of the proceedings of the last meeting, held at Danville, having been read and adopted, various gentlemen were elected members of the society.

Reports of committees having been called for, Dr. Parker reported informally (in the absence of Dr. James Beale) from the executive board. He said that the bill drafted by the board, which was presented at the last session of the legislature, and had for its object the appointment of a board of medical examiners to scrutinize the qualifications of medical men, would, as he had been assured by Dr. Claiborne, a member of the senate, who took an active interest in it, have passed, but for the late period at which it had been introduced. Dr. Claiborne was quite confident of its passage next session.

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Dr. Joynes then reported from the committee appointed to report on the law regarding the fœtus in utero. (According to a law on the statute book, but which has become obsolete, when a conviction involving capital punishment was had against a woman enceinte, medical investigation was required to be had concerning the viability of the fœtus; and, in case proof of such viability was established, execution of the sentence of death was to be deferred until after the birth of the child. The custom now is, however, to defer execution where pregnancy is found to exist; and it was for the purpose of securing the repeal of the old law and legalizing the present custom that the committee was appointed.) The doctor said that a bill had been presented before the legislature, but that it had not been acted on.

On motion of Dr. Atkinson, the committee on the bill was continued.

Dr. McCaw presented a letter from Dr. Payne of Fauquier, chairman of the committee on epidemics of tide water of Virginia, stating that, owing to the late period at which he received his appointment, he was unable to make the required report, and asking for further time, which was granted.

Dr. Anderson presented the treasurer's report; which was read and adopted.

The following gentlemen were then put in nomination for the presidency of the society:

Dr. Cabell of the university, Drs. Joynes, Gibson and Parker of Richmond.

The two last gentlemen had their names withdrawn. Dr. Joynes was then elected and took the chair; when he briefly addressed the society, expressing his regret that some more competent person had not been elected, and thanking the society for the honor conferred on him.

The following officers were elected:

*Vice-Presidents*—Drs. McCaw, Pollard and R. D. Lewis of Richmond; Claiborne of Petersburg; Coates and C. Archer of Henrico.

*Corresponding Secretary*—Dr. Peachy.

*Recording Secretary*—Dr. Parker.

*Assistant Recording Secretary*—Dr. Burwell.

*Executive Committee*—Drs. Bolton, Crenshaw, Haxall, Roddy and Cunningham.

*Nominating Committee*—Drs. Mills, Peachy and Pollard.

The society then adjourned.

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### *Evening Session.*

The society met pursuant to adjournment—but after a long discussion on the "licentiate board" scheme,* many suggestions and modifications having been proposed and argued, the subject was laid indefinitely on the table, and the society adjourned sine die.

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### *Medical Journals.*

Hereafter, the Medical and Surgical Reporter, formerly published in Burlington, N. J., will be issued from Philadelphia, and Wm. B. Atkinson, M. D. of that city will be associated with S. W. Butler, M. D. in the editorial management of the work.

The Pacific Medical and Surgical Journal, San Francisco, Cal. Edited and published by John B. Trask, M. D. and David Wooster, M. D., 8vo., p. 48. Monthly.

Oglethorpe Medical and Surgical Journal, Savannah, Ga. Edited by Prof. H. L. Byrd, M. D. and Prof. Holmes Steele, M. D., 8vo. p. 64. Bi-monthly.

The Southern Medical and Surgical Journal of Augusta, and the American Medical Gazette and Americal Medical Monthly, both of New York, have recently made additions to their respective number of pages.

Prof. Daniel F. Wright occupies the post of editorship in the Memphis Medical Recorder, left vacant by the resignation of Prof. A. P. Merrill.

The New Orleans Medical and Hospital Gazette will hereafter be conducted by Prof. D. W. Brickell, M. D. and E. D. Fenner, M. D., the latter an old and esteemed contributor to medical science, and the founder of the first medical journal published at New Orleans.

Prof. Paul F. Eve has dissolved his connection with the Nashville Journal of Medicine and Surgery; which will hereafter be conducted by Prof. W. K. Boling, assisted by Drs. R. C. Foster and G. S. Blackie.

The Peninsular Journal of Medicine and the Medical Independent of Detroit have been consolidated, and have assumed the title of the Peninsular and Independent Medical Journal. Editors, Profs. Palmer and Gunn, assisted by F. Stearns, pharmaceutist.

The Cincinnati Medical Observer and the Western Lancet have also united under the fused title of Cincinnati Lancet and Observer. It will be edited in future by Prof. George Mendenhall, M. D. and Drs. John A. Murphy and E. B. Stevens.

* Our readers will find the bill, as reported to the senate, in the March number of the Journal, p. 263.

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# VARIETIES.

DR. SIMPLE'S JOURNAL.—(From L'Union Med.)—January 1st.—My reputation is evidently increasing. Yesterday, believing that there had been a mistake made, I carried back to M. P——, bandage maker, a magnificent almanac I had received under cover of an envelope. M. P—— would not receive it back; in the most polite manner he requested me to retain it as a mark of respect he was happy to pay to Dr. Simple, and other very flattering things. If any of your patients should require my services, I hope you will not forget me, added M. P——. I shall not easily forget such an agreeable man.

I have spent most of the day in enveloping, addressing and prepaying one hundred and seventy-three visiting cards, the most of which were sent to me by persons I do not yet know, but who have undoubtedly been attracted by my name. That is very flattering! And my friend Benoit was opposed to my establishing myself in Paris! Those provincials have very narrow views. Would I have received at Tartas the cards from twelve apothecaries, eighteen dentists, from M. F——, Chevalier of the Legion of Honor, and founder of the manufacture of elastic stockings for varices; from MM. B——, P——, C——, &c. bandage makers; from MM. d'E—— and F——, dealers in mineral waters; from M. Popelin, sr. (oil merchant); from M. A. Damoisean, formerly furnisher (of what?) to the prince royal, and a host of other persons more or less remarkable? I hastened to return my own card to these distinguished representatives of science, industry and commerce.

January 2d.—One of my best patients, a rich and distinguished man, has a tumor upon the back of his neck, in the diagnosis of which I desired to have the advice of a surgeon. Day before yesterday Dr. X——, called in by himself, made a brilliant dissertation, which captivated my patient of the Rue Duphot. My learned confrere is so conscientious that this morning, upon leaving his hospital, he desired to visit my patient again, to assure himself that he had made a correct diagnosis. I found my patient touched by this visit, which he took pains to speak to me about.

January 3d.—Just as I was going out this morning, I received the following note from my patient of the Rue Duphot:

"*My dear Dr. Simple*—My disease being surgical, and requiring an exclusively surgical treatment, I have desired Dr. X——, who you had the kindness to introduce to me, and who has accepted, to take charge of the case. Under any other circumstances, for myself or my family, I should have recourse to your good counsel.

Yours, &c. Z."

My friend Benoit, to whom I confided this affair, is obstinate in maintaining that the course pursued by this surgeon was not delicate. Prejudice of the country.

January 4.—I have made out to-day the amount of my accounts which have not been paid for 1857. I shall send out to-morrow my servant with the bills,

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which amount to the sum of 1,785 francs. I reserved this to pay my rent and some other expenses. Benoit, who is always in fear, says that I would do well to guard against these by some other means.

January 5.—Frances, my servant, has returned furious; she brings back 63 francs and a half. They all desired her to come again, because the expenses of new year's day had emptied their purses. This reason is plausible, but Benoit advises me, this year, to send Frances before the last of the year.

January 6.—My friends of the faubourg St. Denis have invited me to tirer les Rois. I drew the bean, and custom requires that I should return the invitation. There was an old woman there who entertained me the whole evening with her catarrh. She did not cease till I had written her a prescription in due form. As she sees a great many people she may be of use to me. She has already spoken to me of a great many people to whom she desires to recommend me. It is well not to neglect any thing.

Benoit, who often makes use of very trivial expressions, says that I allowed myself to be cheated out of a visit. What language!

January 7.—The old lady of last night has had the kindness to write to me the following note:

"*My Good Doctor*—You are so charitable that I have no hesitation in recommending to your kind care an honest, but poor family, of which the father, mother, and an infant are at this moment very sick. The curè of ——, to whom I have spoken of you, will be very thankful for your kindness towards the family of C——, who live in the Rue de Charonne, No. 198, in whom he takes, as do I, a very great interest. If you should, in your visits, pass near them, have the kindness to call upon them in their seventh story. You will do a good work."

From the Place Laborde, where I live, my visits assuredly do not carry me to the Rue Charonne. I took a carriage and went there. (Two hours at 2½ francs, and fee to the coachman 5 francs.)

I wrote to the curè that I would see those poor people once a week, but that a little soup, some good wine, some wood, and some coal would greatly accelerate the effects of the treatment.

It is at all events a good thing to gain the respect of the curè of ——.

Benoit, who is a censurer, pretends that there are in Paris a great many charitable persons who perform their charities over the shoulders of physicians. What villainous ideas!

January 8.—The good Baroness d'U—— has two physicians; one for herself, that is I; the other for her parrot. To her own physician she will only give three francs a visit. It is an old custom, she says, and although I have discreetly remarked to her that the price of every thing has increased in latter years, she nevertheless will not augment the fee. How much does she allow to the physician of her parrot? Yesterday I did not know; I do to-day.

I was called to see her this morning, and prescribed for the reigning epidemic with which she is attacked, when a great person arrived, very well dressed, of a serious air, whom the baroness received with much favor.

"I desired you to call to see my poor Coco," she said; "for two days has been much depressed, has lost his appetite, and has a considerable diarrhœa."

The man of art palpated the animal, examined him with attention, and declared that he was afflicted with inflammation of the bowels. He prescribed

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some enemas, and left after having received—I am ashamed to say it—a five franc piece. But that is not all.

"Ah! mon Dieu! Doctor, I have forgotten something," said the baroness; "run after M. X——, and enquire if it is necessary to keep the stools?"

I acknowledge that for a moment I hesitated to perform this singular commission, but the baroness was so supplicating, that without reflecting further, I ran, and from the top of the stairway cried out in a serious tone, "Monsieur, Monsieur, is it necessary to keep the stools?"

"Certainly, certainly," replied, with equal firmness, my confrere in medicine.

Benoit, who finds fault with every thing, blames me very much for this condescension. The country people know nothing of the exigencies of advanced civilization.

January 9th.—The baroness has promised to get me admitted to the society for the protection of animals. I am rejoiced.

January 10th.—I have become an important person. The director of an important medical journal has signified, by a messenger, that he greatly desired to see my name amongst his list of subscribers, among whom were all the French and foreign medical celebrities. I could not refuse to accept this evidence of consideration; I should not have received such attention at Tartas.

Benoit is decidedly too familiar. He says I was an ass to have accepted the receipt, for if I had bargained, I could have received the journal for half price. How can any one advise such a course?

January 11th.—In preparing the treatise in which I am engaged, and which is destined to open to me the doors of many learned societies, it is necessary for me to reread the work of M. Chomel on general pathology. I went to the neighborhood of a medical school, entered a book store, and enquired for the book.

"We have not *that one*," replied the book-seller, "but we have something more complete, newer, a superior work, which every body buys—two magnificent volumes, as you see."

And, in fact, I saw the Treatise on General Pathology, by M. Monneret. I permitted myself to be convinced, and bought it.

Still, I desired Chomel, and went into an adjoining book-store.

"Oh! sir, that book is very old," I was told. "Since Bouchut has appeared, Chomel is no longer sold. Look at this superb volume."

And I received in my hands an enormous octavo. I thought upon the fine effect it would have in my library, so I bought the General Pathology of Bouchut.

Still, I desired to get Chomel, and for that purpose I went into the book-store opposite.

"We do not keep that article," said this book-seller, "but if I can advise you, I would take the General Pathology of M. Beyrau, which is the most recent resumé, and the best of all the works upon this subject."

This eulogy pleased me, and I added Beyrau to my other purchases. Nevertheless, I did not forget Chomel, and I went on still further to get it.

Here, on account of the bundle of books I had under my arm, they took me for a clerk of a book-store, and to my question the book-seller replies:

"How many copies?"

"One," said I.



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"In order to have a right to the thirteenth, it is necessary to take the dozen immediately."

Believe me, I showed some spirit in replying that I preferred to take the thirteenth, without the dozen.

This book-seller has spoken so highly in praise of the work, of the rapidity with which this new edition is sold, that I am very glad to be obliged to read it again so soon, for in a few days, perhaps, I should not be able to procure a copy.

What a wonderful city Paris is! I go out to buy a volume, and bring back five. These book-sellers have such entertaining manners.

This devil of a Benoit, who takes such care to see the evil side of every thing, says, "he understands very well why the publishers of Monneret, Bouchut, and Beyrau would not sell me Chomel, and why on the contrary the publisher of the last wishes to sell me a dozen." Is not this skepticism very much misplaced?

January 12th.—A learned apothecary of my neighborhood has honored me, by recommending to my medical observation some pills which he has compounded, the first use of which he desires to give me. He says they are excellent for the prevailing influenza, quieting the cough, and all the severe symptoms. To return this attention I shall send all my patients afflicted with influenza to the apothecary X——.

January 13th.—It is very odd! all my influenza patients, who have taken the pills of the apothecary X——, complain that he sells them very high, and that they calm absolutely nothing.

14th.—Benoit arrived this morning, and made a scene.

"How is this, Simple? you advertised, and upon the 4th page!"

"I do not understand you."

"Then read here."

"'*Influenza.*—The most celebrated physicians of Paris, and among others Dr. Simple, prescribe with success the soothing pills of the apothecary X——, No. — —— street.'

"I have not consented to this announcement."

"You will deny it immediately?"

"Certainly."

I reflect a moment, and I believe the best way is to write a polite note to the apothecary, desiring him to say, that it is through error he introduced my name in his announcement.

January 15th.—I received the following note from the apothecary:

"*Doctor*—There is no error in the announcement to which you have called my attention. I hold, at the disposition of whoever may wish to inform himself upon the subject, eight prescriptions signed by you, in which you prescribe my pills. I have, therefore, announced nothing contrary to the truth, and I have nothing to rectify.

Yours, &c."

How shall I get out of this? My old friend Benoit has gone to the country for two days. I will write to the Union Medicale.—*Am. Med. Monthly.*

THE BATHS OF SCHWALBACH.—There are few things on earth more enjoyable than a residence under water in one of these baths for half an hour. I

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speak from experience of this delight, having philosophized tranquilly on the matter for that term of life, one morning shortly after dinner. The temperature, as prescribed me by the bath-woman, was 86° Fah. and I had no reason to differ from her in opinion as to the result. The bath just holds sufficient water to cover you completely; lying at full length, with the back of your head resting on the edge, you fold your arms, and compose yourself to peace. The position of your head gives you a view of yourself through the green looking, transparent water; and your first observation is one of admiration of the extreme whiteness and fairness of your skin, and you are reminded of the naïve expression of admiration of the Frenchman, who said, with regard to a neighboring bath, that 'on devient amoureux de soi-même.' Next you are struck by the appearance of what seems to be a copious eruption breaking out over the whole skin; but an eruption of an unusual kind, an eruption, in fact, of glittering pearls; and then the adhesiveness of the pearls is remarkable; you cannot shake them off, but you must wipe them off with a sweep in order to come to your white skin once again, and they collect again as fast as ever. But, as you are prohibited from moving while in the bath, and as your own sensations soon tell you that you are chilled by motion, but feel warm and comfortable under this novel costume of pearls, you are fain to leave them alone. But this is not all; your bath is not a silent one; it is a musical bath; and while you are thus amusing your eye, firstly, with the charms of your own skin, and then with the sparkling vest of pearls that quickly clothes it, your ear is gratified by a little talkative wick! wick! wick! wick! wick! wick! wick! wick! wick! and when you turn to look after the little fellows that are treating you to a pigmy concert on the surface of the water, and begin to fancy yourself a Gulliver, in one of the seas of the Lilliputians, there is a round-mouthed chuckle close to your ear, which makes you afraid that the Lilliputians have, since settling accounts with Gulliver, hired an army of stronger fellows to fight their battles in case of need; and then, dear me! your mind is relieved from anxiety by finding that the wick! wicks! are only little playful gas bubbles that are cracking their jokes and their sides also, on the surface of the bath, and that the more noisy laughing fellows are only bubbles of a larger growth, that slip out from under your back, or from the hollow of your armpits. My half hour soon slipped away, and if his Royal Highness of Clarence took pleasure in his bath of Malmsey, I also enjoyed my bath of the water wine of Schwalbach. It is here that the old grow young and the weak strong; while calm, tranquillity and ease envelope, as in a mantle, the charmed and soothed senses.—*Erasmus Wilson.*

PALÆONTOLOGIA.—There are few things to which men more tenaciously cling than their pet scientific theories. And the more obscure and purely conjectural these may be, so much the more loyal is their adherence. They may change their opinions on ordinary matters which only affect men and women; but will battle tooth and nail over a disputed point of pre-Adamite existence, or a subtle problem in metaphysics. Political toryism is unstable and fickle compared to philosophical conservatism. And there was keen wit in the observation made concerning a famous French geologist, that "if he had lived at the creation he would have prayed that Old Chaos might be spared."

The philosophers are now on the qui vive about a new theory recently put

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forth by M. Edouard Lartet, an eminent palæontologist. After carefully examining the remains of antediluvian animals existing in various museums, he lately laid before the French academy a very interesting outline of certain opinions he has thus been led to form concerning the origin and history of the Quaternary Fauna.

There have been found at various times in Europe the remains of numerous animals which at present dwell only in Africa, and of others which now inhabit Siberia. It is evident that all these, in days of yore, made themselves at home where their bones are now found. And Mons. Lartet divides these, hitherto included under the general title of quaternary or diluvial, into two species. In his first group he includes the cape rhinoceros, hippopotami, lions, &c. whose present habitat is something like eighty degrees further south than that of their primæval ancestors. Under the second group he ranges those mammals, such as the reindeer and musk-ox, which now only exist in high northern latitudes; but the bones of whose progenitors are found in the southwest of Europe dispersed over 70° of longitude.

This distribution is explained by the supposition that at the glacial epoch, when the ice encroached so far south that even the cold loving fauna of northern regions could not stand it, and migrated into Europe, the invading cold also drove the primitive native animals in search of a more congenial climate. When the cold receded, the starved-out mammals returned to their native north; whilst the ancient inhabitants of Europe took kindly to the warmer climates they had found, and left the bones of their ancestors to bother modern palæontologists.

Mons. Lartet also points out, that although several of the fauna of the period (as the elephas and bos primigenius) have become extinct, yet very many of the most delicate and fragile molluscs, recognized to have lived at that time, are perpetuated to the present time. Of fifty-seven species discovered, fifty-four are still found to exist.

Meddlesome midwifery.—We are told that, when Spinola besieged Bergen-op-zoom, a woman, near her time, fetching water, was cut off in the waist by a cannon ball, and her lower parts fell into the water; people ran immediately to her, and saw a child stir in the water. It was drawn out, and carried to Don Cordua's tent, where it was carefully attended. Afterwards, it was carried to Antwerp, and the Infanta Isabella, caused it to be christened by the name of Albertus Ambrosas.

The Dutch fœtus appears to be remarkably tenacious of vitality. Professor Van Kampen, in his work on Holland and Belgium, tells us that the church at Zaandam possesses a picture descriptive of a curious incident; a furious bull had killed his master in the presence of his wife, who was *enceinte*. In the agony of despair, she rushed towards the ungovernable animal, which, with its horns, tossed her into the air; she fell, and the infant to which she gave birth, in dying, survived the catastrophe. Vol. vii, part 2, of the transactions of the Medical and Physical Society of Calcutta, contains a case by Dr. Spilsbury, which is at once more creditable and more remarkable than either of the above. The wife of a Madras sepoy, far advanced in pregnancy, was riding on a bullock, when the animal stumbled and fell; she was pitched forward on one of the horns of the

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bullock, which entered about an inch above the os pubis, penetrating the cavity of the womb. This happened at sunset. At 11 P. M. Dr. Spilsbury saw her and found the hand of a child protruding through a wound two inches long, from which there was slight hæmorrhage and discharge of liquor amnii. The woman, by her own account and by the size of the child, being near her full time, labor soon commenced, on irritation of the os tincæ; the child scarcely breathed after birth, and had been injured by the horn on its neck and shoulder. On expulsion of the child, considerable protrusion of the intestines took place, but was easily and speedily prevented. With the exception of moderate inflammatory and febrile symptoms, which set in twelve hours after delivery, but which proved amenable to prompt antiphlogistic treatment, recovery appears to have been as rapid and complete as is usual after natural parturition.—*Indian Annals.*

CHINESE ORTHOPŒDICS.—The correspondent of the Times in China gives the following interesting description of the manner of deforming the feet of Chinese females:

"There are small-footed ladies at Hongkong, who gain a very fair livelihood by exhibiting their pedal extremities to sea captains and other curious Europeans, at a dollar a head; but as so superficial an examination of this national peculiarity did not satisfy me, I had recourse to some of my good friends among the missionaries. By their aid I obtained that some poor Chinese women should bring me a complete gamut of little girls from the missionary schools. Many of these female children probably owed their lives to the persuasion (aided by opportune donations of rice) of my missionary friend and his lady, but their influence had been powerless to prevent the torture of their feet. On the appointed day they were all seated in a row in my friend's library, and their feet, which I suspect had undergone a preparatory washing, were unbound by their mammas. The first was a child of two years old. Her penance had just commenced. When the bandage of blue cotton was taken off I found that the great toe had been left untouched, but the other four had been forced down under the ball of the foot, and closely bound in that position. The child, therefore, walked upon the knuckle joints of her four toes. The toes were red and inflamed, and the ligature caused evident pain. In the next three children (all of ages advancing at small intervals) the preparation was only to the same extent; it was confined to the four toes; gradually, however, these four toes, ceding to the continual pressure, lost their articulations and their identity as limbs, and became amalgamated with the sole of the foot. In the eldest of the four the redness and inflammation had entirely disappeared, the foot was cool and painless, and appeared as though the four toes had been cut off by a knife. The foot was now somewhat the shape of a trowel. In the fifth girl I saw the commencement of the second operation—a torture under which sickly children frequently die. The sole of the foot was now curved into the shape of a bow; the great toe and heel being brought together as near as possible. Take a jujube and double it till two points of the lozenge nearly meet, and you will see what I mean. This is done very gradually. The bandage is never slackened—month by month it is drawn tighter—the foot inflames and swells, but the tender mamma perseveres—as the bones and tendons accommodate themselves to the position constrained by the bandage, so it is drawn tighter. At last the ball of the natural foot fits

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into the hollow of the sole, the root of the great toe is brought into contact with the heel. The foot is a shapeless lump. The instep is where the ankle was, and all that is left to go into the slipper and to tread the ground is the ball of the great toe and the heel. This is the small foot of the Chinese woman—a bit of toe and a bit of heel, with a mark, like a cicatrice left after a huge cut, running up between them. Two of the girls were yet suffering great pain, and their feet were hot and inflamed, but in the eldest the operation was complete. She had attained to the position of a small footed woman, and her feet were quite cool, had no corns, and were not tender to the touch. One of the mammas, influenced perhaps by a little liberality in the article of rice money, intrusted me with a Chinese mystère de toilette. Sometimes, it seems, when a woman is expected to have to do hard work, her toe and heel are not drawn so tightly together as to produce the true 'small foot.' To disguise this imperfection upon her marriage day she has recourse to art. A piece of cork, shaped like an inverted sugar loaf, is strapped on to her foot, and the small part goes into her slipper and passes for her foot."

NATURAL ANÆSTHESIA.—"Starting and looking half round, I saw the lion just in the act of springing upon me. I was upon a little height: he caught my shoulder as he sprang, and we came to the ground together. Growling horribly close to my ear, he shook me as a terrier does a rat. The shock produced a stupor similar to that which seems to be felt by a mouse after the first shake of the cat. It was like what patients partially under the influence of chloroform describe, who see all the operation but feel not the knife. This singular condition was not the result of any mental process. The shake annihilated fear, and allowed no sense of horror in looking around at the beast. This peculiar state is probably produced in all animals killed by the carnivora; and, if so, is a merciful provision by our benevolent Creator for lessening the pain of death."

*Livingstone's Travels.*

NON-LIABILITY OF SCIENTIFIC MEN TO BE SUBPŒNAED TO GIVE EVIDENCE. From the Medical Times and Gazette for March, we perceive that Lord Campbell has recently given a judgment at Warwick to the following effect, viz:

"A scientific witness having asked his opinion as to whether he was bound to attend upon being served with a subpœna, he would say that a scientific witness was not bound to attend, and ought not to be subpœnaed. If he knew any question of fact, he might be compelled to attend, but her majesty's subjects were not compellable to give their attendance to speak on matters of opinion."

This is certainly a very important little item to medical men. If there is a nuisance connected with the fact of being a medical man, it is that we are at all times liable to be picked up on the street and hauled off to court to give scientific opinions in cases in which we have not the slightest interest, and from the parties engaged in which we receive no remuneration whatever for our detention and trouble. If there is a correct principle among men, it is that which teaches that the laborer is worthy of his hire. If scientific men are necessary in courts of justice, then they are as much entitled to pay for their services as are the lawyers who question them, and our laws should be so amended as to compel parties concerned to pay them. We have always felt rebellious against this

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system of extortion of gratuitous services from medical men—for it is the medical man who is mostly preyed on—and we earnestly believe that if the prevalent principle were tested before our higher courts, the matter would be decided in our favor. At the very moment that we write, a case in point occurs to demonstrate the absurdity and injustice of the present practice. A woman is found dead; a physician is called in to make a post-mortem examination; he makes it, and his opinion is carried before the court because another party is accused of having caused the death. But other medical testimony—in the shape of opinion—is deemed necessary, and another physician is stopped from his business—actually detained from doing his duty to himself and his patrons—and hauled off to the court to give these opinions, and with no earthly prospect of being paid one dime for his detention and services. Is there any show of justice in this? No! medical men are as liberal in the gratuitous dispensation of their services as any men living, and it is their pride to be so; but there is reason in all things, and we are for rebellion against this abuse of our services and our good nature.—*New Orleans Hosp. Gazette.*

Medicine in Bengal.—Dr. Harrison publishes (Indian Annals, Jan. 1858) an account of the college at Calcutta, from which we extract the following details: At the medical school, ten English professors give instruction in anatomy, physiology, zoology, chemistry, materia medica, botany, obstetrics, medical jurisprudence, surgery, medicine and ophthalmology. The pupils have admission to an extended museum; 900 subjects were furnished last year for the dissecting room; an ample field for clinical study is afforded by an hospital of 700 beds. Since the foundation of the college, in 1835, there have graduated 456 native physicians. Independently of the regular course, lectures on anatomy, medicine and surgery and materia medica are delivered by native professors.

Alcohol and food.—Liebig tells us that, in temperance families, where beer was withheld and money given in compensation, it was soon found that the monthly consumption of bread was so strikingly increased, that the beer was twice paid for, once in money and a second time in bread. He also reports the experience of the landlord of the Hotel de Russie at Frankfort during the peace congress; the members of this congress were mostly teetotallers, and a regular deficiency was observed every day in certain dishes, especially in farinaceous dishes, puddings, &c. So unheard of a deficiency, in an establishment where for years the amount of dishes for a given number of persons had so well been known, excited the landlord's astonishment. It was found that men made up in pudding what they neglected in wine. Every one knows how little the drunkard eats; to him alcohol replaces a given amount of food.—*Blackwood.*

Five children at one birth.—On the morning of Monday last, a woman named Elspet Gordon, residing in Rothes, gave birth to three male and two female children. The three boys were born alive, and lived till the following morning, but the two girls were still born. The births were premature, being in the sixth month; but, what is very extraordinary, all were full grown for the period of gestation; nor is this the most surprising circumstance in the case, one of the boys having actually two front teeth when he came into the world. Dr. Dawson, Rothes, attended the woman, who, we are happy to say, is doing wonderfully well.—*Elgin Courant.*

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Medical epitaphs.—A prolonged medical statement of the disease of which the departed may chance to have died, is extremely popular. At Acton, in Cornwall, there is this account of how one Mr. Morton came by his end:

"Here lies entombed one Roger Morton,
Whose sudden death was early brought on;
Trying one day his corn to mow off,
The razor slipped and cut his toe off:
The toe, or rather what it grew to,
An inflammation quickly flew to:
The parts they took to mortifying,
And poor dear Roger took to dying."

And here is a still more entertaining one, upon a certain lady in Devonshire; singularly free from any nonsensical pretence or idle bravado:

"Here lies Betsy Cruden,
She wood a leaf'd but she cooden,
'Twas na grief na sorrow as made she decay,
But this bad leg as carr'd she away."

Whenever I read (and it is often) of folks who were passionately desirous to leave this vale of tears, I shake my head, and quote the simple-minded Betty: "For all this," says I, "they wood a leaf'd but they cooden."

There is a distressing inaccuracy of metaphor in the following south country elegy, but the meaning is painfully distinct:

"Here lies two babes as dead as nits,
They was cut off by ague fits."

A doctor of divinity, who lies in the neighborhood of Oxford, has his complaint stated for him with unusual brevity, as well as his place of interment:

"He died of a quinsy,
And was buried at Binsy."

To complete these medical extracts, I may quote this warning cypress flower culled from a Cheltenham cemetery:

"Here lies I and my three daughters,
Killed by a drinking of the Cheltenham waters;
If we had stuck to Epsom salts,
We'd not been a lying in these here vaults."

Important to druggists.—Late advices from Guatemala state that the cochineal crop has been entirely destroyed. Also that the government has offered premiums for the preservation and cultivation of the tree producing the balsam of tolu.

Music.—Dr. Rhuders, physician, has set to music the palpitations and irregular beatings of the heart of a female who is a patient in the hospital at Upsal. "This disease, written in musical notes, with quavers and semi-quavers, forms a kind of waltz, and is one of the greatest curiosities of pathological science."

*Swedish Paper.*

Chloroform in malingering.—Dr. Hans Zocher has discovered, by means of the sleep produced by chloroform, the deception practiced by a pretended mute, who attempted to quarter himself upon the cantonal hospital at Munsterlingen during the winter. A full dose of chloroform betrayed his power of speech; his involuntary vociferation was of the most distinct and articulate character.

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